

WebEye SPD User's Guide

* This manual is for WebEye SPD 160 Firmware version 1.2.0. If you have later version of firmware, please download the last updated user's guide from WebGate's homepage (www.webgateinc.com)

System Requirements

■ For WebEye SPD

- Network: 10 Base-T LAN
(Leased line, xDSL, Cable Modem, ISDN)

■ For a PC to access WebEye SPD

- Processor: Pentium II and above
- RAM: 64MB and more
- OS: Windows 98/NT/2000
- Screen Resolution: 1024 X 768 pixels and above

WebGate Inc.

FCC Compliance Statement

Caution : Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE : This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Warning

This is a class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures



Important Notice

1. WebEye SPD is for indoor use. Therefore note that the CCD (charged coupled device) inside the product can be damaged permanently if the camera lens is exposed to direct sunlight. When you place WebEye SPD under the glaring light, we recommend using an iris lens. If your application demands prolonged exposure to sunlight, you should consider to equip with a sun visor.
2. WebEye SPD is not weatherproof. Therefore you should be well aware of environmental specifications that are included in the manual. In case of outdoor use, where it needs additional weather criteria, you should equip weatherproof case to protect WebEye SPD from water, moisture, or temperature (higher or lower than specification). For WebEye SPD cleaning, gently wipe with clean dry cloth.
3. Be sure to use a DC adapter that is provided by Web Gate Inc. Connecting WebEye SPD directly to a AC current, may cause electric damages to WebEye SPD.
4. Be caution in handling WebEye SPD for physical shocks may harm the product.
5. WebEye SPD is made of aluminum. Therefore you can hurt human beings if you throw it to them or hit on them. When installing WebEye SPD, be sure it is attached tight and stable to avoid any human injures. Be cautious to locate on safe places where children are unreachable.
6. If WebEye SPD does not operate properly, please contact the closest local WebGate distributor for after sales service. In all cases, you are prohibited to disassemble the product. If so, WebGate is not responsible for any malfunction nor service warranty.
7. Camera surveillance laws may differ for each country. Therefore, please contact the local region first to avoid any surveillance law violations and to apply for authorized purposes only.

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I. Introduction

- **What is WebEye ?**

WebEye is an Internet-based digital network camera, which adapts high resolution, using image compression mechanism and via network. It connects directly to Ethernet network and provides live motion color pictures over the Internet.

WebEye is a microprocessor-based device that contains a digital color camera, web server functionality, optimized hardware for image compression, and physical Ethernet connection. Therefore it does not require any extra S/W or H/W. Simply provide power and connect LAN cable to the WebEye.

WebEye generates pictures in Wavelet format, which compresses images more effectively than the standard JPEG does. WebEye compresses and transfers reliable and high quality pictures using Wavelet compression technology. Moreover, Wavelet progressively generates pictures from low rates of resolution, so reduce waiting time for users.

WebEye has wide range of applications to monitor places and objects. The most common applications are; construction areas, important equipments, banks, hospitals, amusement park, traffic jammed highway, and baby care centers. Therefore, You can conveniently monitor any place thorough web browsers from the remote sites.

- **Features and Benefits**

Ease of Use – WebEye does not require the use of a PC frame grabber card nor interact with any other server. The only software required is Netscape Navigator 4.x or above and Microsoft Internet Explorer 4.x or above. Since it has a complete plug-and-picture functionality, the only step one has to take is to assign a valid IP address.

Open Standards Environment - Supporting TCP/IP networking, SMTP e-mail, HTTP and other Internet-related protocols; the WebEye can be used in mixed operating system environments, such as, Windows, UNIX, Macintosh and OS/2. It integrates easily into other WWW/Intranet applications and CGI scripts.

Simple Administration - Using a standard Web browser, you can configure and manage WebEye directly from its own Web pages. And, when a new firmware release becomes available, you can simply upgrade all of your WebEye camera products remotely over the network.

Wavelet Image Format - As opposed to many inferior solutions that need to fracture image files prior to broadcast, WebEye delivers complete high-quality & highly compressed pictures in Wavelet format. Wavelet has 30%~300% higher image compression rates than the standard JPEG. Wavelet technology allows the integrity of your pictures to be smaller than any other web cameras and to be viewed with crystal clarity and high speed. (123fps in case of 3KB per frame)

External Device Connection - Supporting an auxiliary Input/Output Connector, you can connect your WebEye to a variety of external devices; such as, IR-sensors, switches, alarm relays and external video input (Max. 4Ch). In combination with the programmable alarming facilities, you can quickly develop various security applications that are triggered on time or alarm-based events.

User's Programmable Space – WebEye contains user-programmable and user-configurable spaces that are about 6MB out of 8MB total Flash Memory. It means you have own web server which allows you to create your own homepage or free zone in your WebEye.

Embedded Linux Operating System – WebEye adopts cutting-edge technologies of digital image processing & networking. For WebEye consists a high performance CPU (32bit RISC), running embedded Linux, it allows more than 100 users to be connected to WebEye simultaneously.

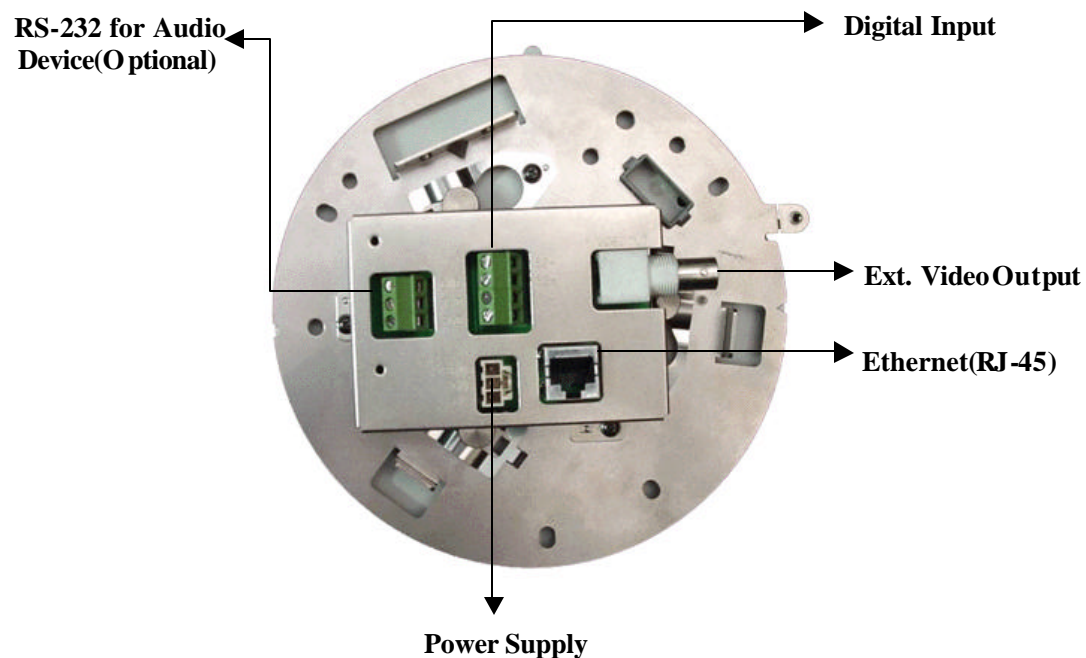
II. Product Descriptions

1. Contents

* Unpack and check all the items as below.

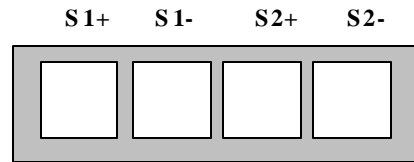
Item	Description	Remarks
WebEye SPD	Web Camera Server	
AC Adapter & Power cable	AC 24V 60Hz, AC 230V 50Hz	Optional
Lens	Optical 16X : 3.9mm ~ 62.4mm Digital 8X, Auto-iris & Focus	Already assembled
Manual	WebEye SPD User's Guide	CD
Crossover Cable	1 m crossover cable	Red colored
Bracket	Ceiling Attachment Device	
Setup Disk	Setup Software	

2. WebEye SPD Over View and Descriptions

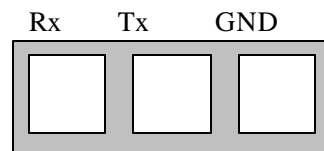


3. Descriptions on Rear Port (RS-232 and Digital Input)

To connect external devices such as infrared sensors. They are 2pairs of isolated input ports.



RS-232 for Audio Device(WebEye A10)



III. WebEye Installation Summary, Connecting & Placing

1. Installation Summary

- Connect Ethernet and Power to WebEye SPD on local network for configuration.
- Install a setup program for WebEye SPD in to a PC on local network.
- Assign an IP address to WebEye SPD and configure administrator's condition.
- Configure user 's condition.
- Place WebEye for your purpose, and re-connect power and Ethernet.
- Set the Preset.

2. Connecting

- Connect Ethernet line to the Ethernet port.
- Connect the power supply to a power supply port.
- Confirm that the LED of the Ethernet port blinks.

3. Placing

- Place WebEye SPD appropriately for your purpose.

* You must use a specialized bracket for ceiling attachment of WebEye SPD.

Warning

- Please note that camera lens' direct exposure to sunlight may cause permanent CCD (charged coupled device) damage, if the camera lens is exposed to direct sunlight. When you operate WebEye in the glaring light, we recommend using an iris lens.
- If your application demands prolonged exposure to sunlight, you should consider to purchase a sun visor.

IV. Assigning IP Address and Configuration Administrator's Condition

*** Important ***

To access WebEye, you firstly have to assign an appropriate IP address. When you assign an IP address to WebEye, make sure to use unoccupied IP address, and not to use the default or example IP address.

Terminology

IP Address

IP address is an identification code for computers and devices on a TCP/IP network. Networks using TCP/IP protocol route messages based on the IP address of the destination. Within a closed network, IP addresses can be assigned at random as long as each one is unique. However, connecting a private network to the Internet requires using registered IP addresses to avoid duplicates. IP address can be acquired from a network administrator or an Internet service provider.

MAC Address (Media Access Control Address)

MAC address is a hardware identification code that uniquely identifies each node of a network. The MAC layer interfaces directly with the network media. Consequently, each type of network media requires a different MAC layer. The MAC address of WebEye is a 12-digit number. A unique MAC address can be found on the label at the bottom of each WebEye.

Crossover Cable

The crossover cable (red) provided with the WebEye is used to connect the WebEye with a PC. A HUB is not necessary to connect the WebEye to a PC if a crossover cable is used.

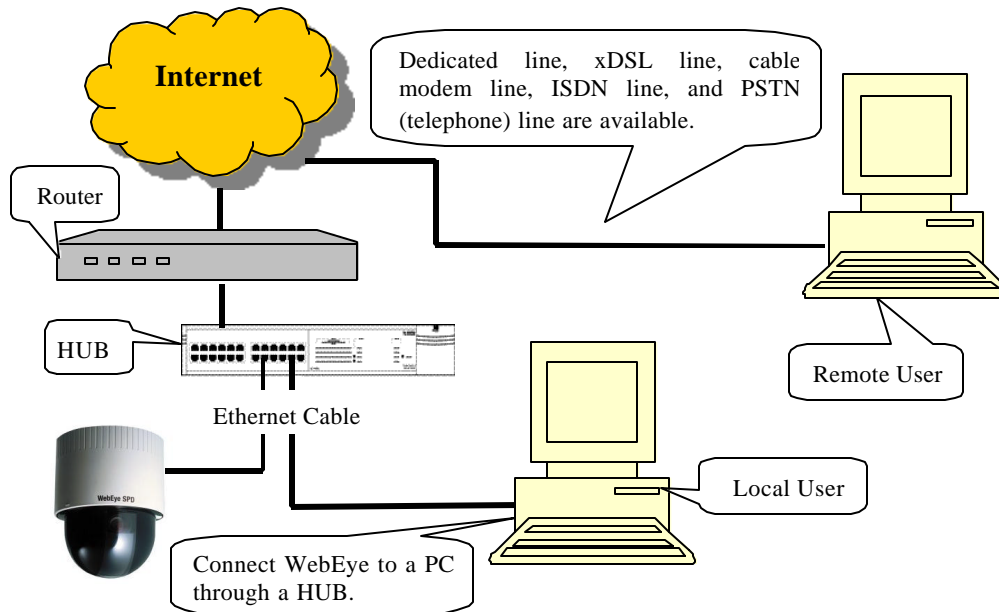
Direct Cable

The direct cable (white) should be used if a HUB is used as an intermediary between the WebEye and PC.

1. Connecting WebEye to a PC

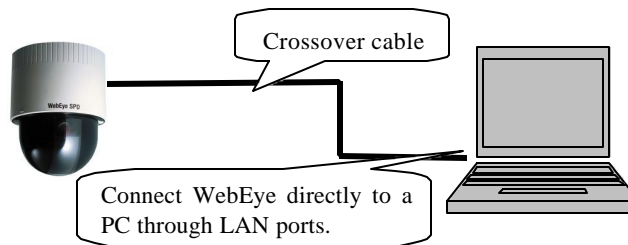
1) Connecting WebEye SPD on Internet or LAN.

- You may use Ethernet cable (white colored one) to connect WebEye SPD on Internet or LAN. With this connection remote user may not access WebEye SPD before local user configure its network setting.



2) Connecting WebEye to a PC.

- You may use crossover cable (red colored one) to directly connect WebEye E10/E104 to a PC. This connection is just to configure WebEye.



IP Address Assigning Methods

- **With setup program**

- Assemble and place WebEye
- Assign IP address to WebEye using setup program on local network.
- Access WebEye through Web browser with the IP address and configure user's condition and administrator's condition.
- If it is impossible to assign IP address with setup program, try it with ARP command

- **With ARP command**

- Assemble and place WebEye
- Assign IP address using ARP command on local network
- Access WebEye through Web browser with the IP address and configure user's condition and administrator's condition.

2. Assigning IP address and configuring administrator's condition with setup program

1) Starting a Setup Program of WebEye

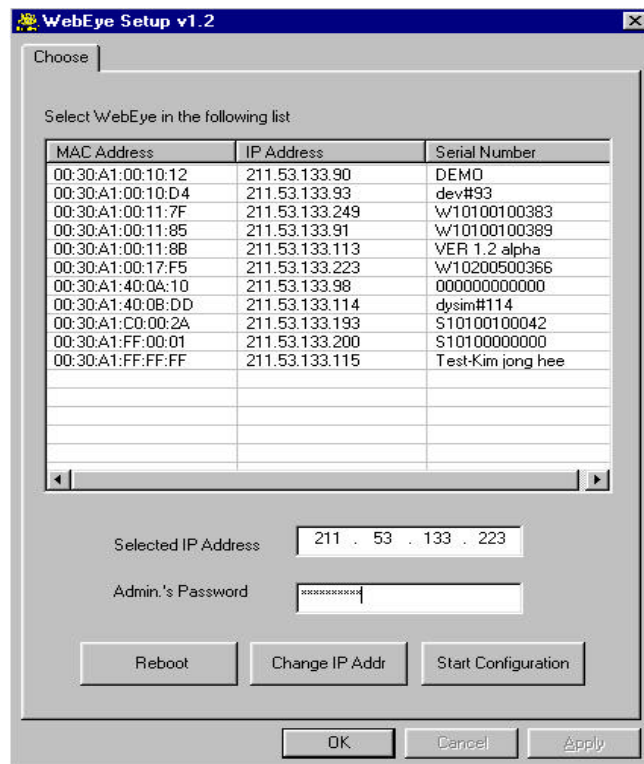
Click the file 'WebEyeSetup.exe' on your PC. When the setup program is executed, the setup program detects and shows every WebEye connected at the local network.

Among the WebEyes, choose one that you want to assign a new IP address. (Default figure is 211.53.133.92). To choose a WebEye is to click on its MAC address or IP address.

When a WebEye is selected, an IP address shows in the blank of 'Selected IP Address'. You should key in a password in the blank of 'Admin's Password' to assign (or change) IP address to WebEye and to set up it. Default password is 'admin'.

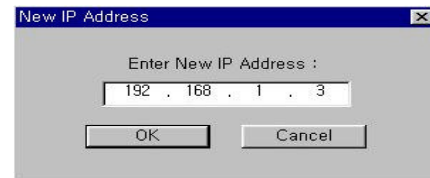
After then, you can change IP address by clicking 'Change IP Addr' button or set up by clicking 'Start Configuration' button.

If WebEye has any problem, you can reboot without adjusting power supply. 'Reboot' button works as on/off switch.



2) Assigning IP Address to WebEye

After keying in the administrator's password, click 'Change IP Addr' button to change your WebEye's IP address. Type in a new IP address that you are going to assign to your WebEye. Then confirm it with the 'OK' button.



3) Configuring Administrator's Conditions

After assigning a new IP address to user's WebEye (select a WebEye), you may configure the administrator's condition of the WebEye. When you click 'Start Configuration' button, the Setup program automatically connects you to Admin page of WebEye Homepage. (For more detailed information, refer to Chapter VI 'Configuring Administrator's Condition at Homepage')

Start Configuration

3. Assigning IP Address with ARP Command

1) Using ARP in Windows 98 and NT

When the PC's operating system is Windows 98 and Windows NT, follow as below.

- Open a DOS window and type the following commands.

```
Arp -s <WebEye IP address> <WebEye Ethernet address>
Ping -t <WebEye IP address>
```

- Example

```
Arp -s 192.168.1.3 00-40-8c-10-00-86
Ping -t 192.168.1.3
```

2) Using ARP in Windows 95

When the PC's operating system is Windows 95, follow as below.

- Open a DOS window and type the following commands.

```
Arp -s <WebEye IP add.> <WebEye Ethernet add.> <my PC IP add.>
Ping <WebEye IP address>
```

- Example

```
Arp -s 192.168.1.3 00-40-8c-10-00-86 192.168.1.2
Ping 192.168.1.3
```

3) Verifying Installation

After completing task successfully with above procedures, a following message or similar ones will appear on the screen:

```
Request timed out
:
Request timed out
Reply from 200.243.232.178: bytes=32 time=2ms TTL=255
Reply from 200.243.232.178: bytes=32 time=2ms TTL=255

Ping statistics for 200.243.232.178:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milliseconds:
        Minimum = 1ms, Maximum = 2ms, Average = 1ms
```

If you don't receive the reply by the 'ping' command, try pressing 'F3' and 'Enter' keys again. Normally 'Request timed out' messages appear 7 times before you receive proper reply.

If you succeed in utilizing above commands, you will receive reply continuously. You may stop them by pressing <Ctrl>+<C> keys.

When you stop receiving reply with <Ctrl>+<C> keys, data loss may be from 0% to 99% statistically, meaning it is normal to get ready. This is normal reply you would get. If the statistic shows '100% loss', you should check the following criterions such as; whether network line and connection status are stable or not; whether it is available IP address which is assigned to WebEye or not; and whether a PC has got the same local network's IP address as WebEye has. Same local IP address of C grade network means that first 3 rooms' numbers are same but the fourth ones are different. For example 192.168.1.2 and 192.168.1.3 are same local network IP addresses. (If there is 'Network Mask' on network, it can be a different case. For detailed information on IP, refer to appendix 3)

V. Accessing WebEye Homepage & Monitoring Real-time Image

After assigning WebEye an IP address, you can configure the WebEye within its own web pages through any standard Web browser on local or remote network.

1. Starting Web browser

Start your web browser by entering your WebEye IP address. Then you can see a build-in homepage of WebEye.

- Example

`http://200.243.232.178/`

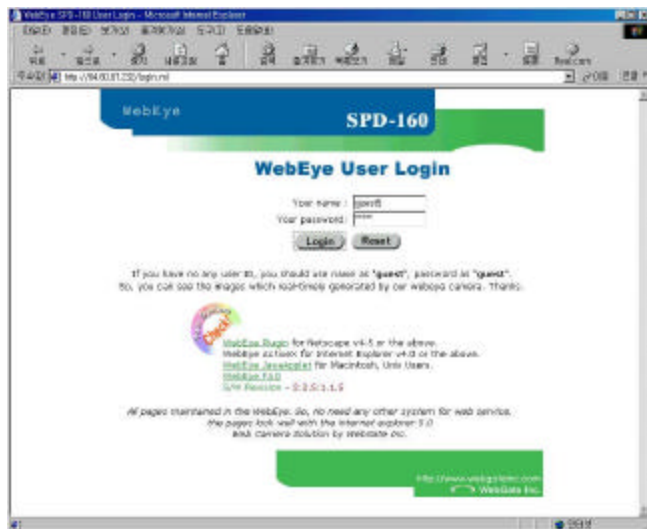
WebEye simultaneously supports up to 100 users. If a person tries to access WebEye for the 101st user, one cannot receive any image but will see a message of user counter on upper right side of homepage as 'Running Video Channel: 101'

2. Login page

1) ID and password

To verify registered WebEye users, there is the Login page. If you are to connect to WebEye, you should follow the Login procedures. If you key in user's ID and Password, you may access to a viewer to monitor real-time images, and if you key in administrator's ID and password, you may access to Admin page to configure administrator's conditions.

Both default user's ID and password are set as 'guest', and administrator may change them at Admin page. But, each ID and password must be composed within 9 bytes. (e.g. 9 English letters)



2) WebEye Plug-in for Netscape user

To see the image on Netscape browser transferred from WebEye, user should install WebEye Plug-in first by clicking WebEye Plugin menu. When you connect WebEye for the first time or you have a Plug-in of old version, you have to download it clicking 'Download WebEye Plug In Now!' Then you click 'Grant' and 'Install' buttons respectively.

3) WebEye Active-X for MS Explorer User

For a MS Explorer User, Active-X Control is prepared. The program will be installed automatically when user accesses to WebEye. For Active-X installation on your PC, just click 'Yes' to the question if you want to install the program. If you cannot see images, you should check if Active-X Control file is installed properly or not. You may check WebEye Control (Active-X Control) file in the fold of C:\Windows\Download Program Files. If the WebEye Control file is not installed at all, try it again to re-install it, please. If the Plug-in or Active-X program fails to be installed automatically, you may install it manually. The manual installation program is provided at 'Client Support' page in WebGate's Internet homepage. (<http://www.webgateinc.com>)

The installation will not take more than 1 minute. Please, don't click any button until the installation is completed.

4) FAQ

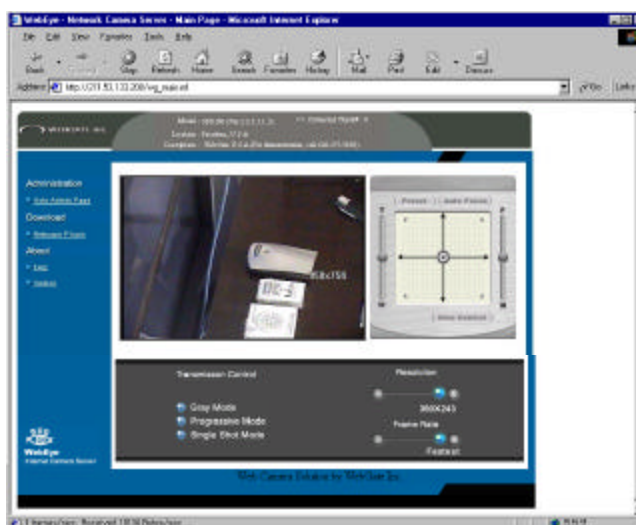
A lot of questions and answers are provided here for troubleshooting. If user has another question that is not answered here, please contact WebGate through its homepage.

3. Viewing WebEye SPD

There are 3 viewers of real-time monitoring in WebEye homepage. "Default Viewer", "720×468 Viewer" and "Server Push Viewer". An administrator may set a viewer as a first user interface. And connected user may monitor real-time images through the selected main viewer by administrator.

1) Real-time monitoring through default viewer

The viewer page is composed of three sections. Real time image screen, Java applet Pan/Tilt/Presets control panel and video control section at the bottom of page.

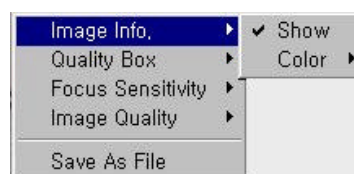


(1) Useful Pop-up Menu on the Real time monitoring screen

A small window of 5 functions appears when user clicks the right button of a mouse. But a certain users who have the authorities can utilize other 4 functions such as 'Image Info', 'Quality Box', 'Focus Sensitivity', and 'Image Quality', except 'Save File As' menu

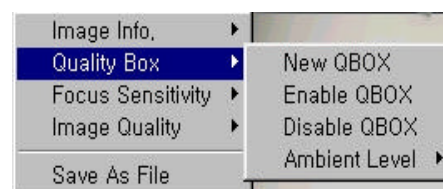
Video Information Setting

This page is to change the color of time showed on the left top of the image, or not to show time.



Configuration of High Qualified Image Area (Focusing Area)

You can overcome the insufficient network bandwidth by this function. Click the right button of your mouse at any place on the picture.



If you want to set a new focusing area, you choose 'New QBOX' button. First you place and click your mouse where you want to start and then click again where to stop. You can also use existing area to focus again by clicking 'Enable QBOX'. 'Disable QBOX' is to finish. The image activated Focusing Area function is as below.



User may set the quality of out of focused area with 'Ambient Level'. If you select 'Level 1', the quality is similar to focused area. And if you select 'Level 5', the image of out of focused area is shown as dark.

Focus sensitivity

When user utilizes zoom lens installing into WebEye, one may configure moving range of one click. The sensitivity is from Level 0 to Level 9. By selecting 'Level 9', user zooms in or out at the largest range.

Level 0
Level 1
Level 2
Level 3
Level 4
Level 5
Level 6
Level 7
Level 8
Level 9

Image quality

User sets image quality of the whole image per channel. If user chooses the 'Level 9', WebEye sends the finest image. However, transmission speed will be reduced because of large sized data. If user chooses 'Level 0', WebEye sends dullest image but fast.

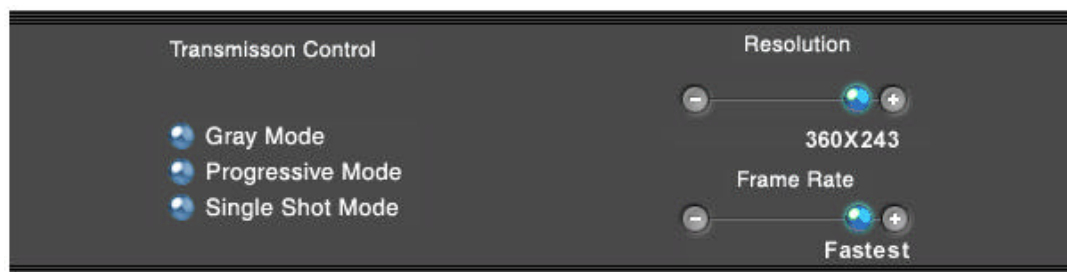
Save File As

User may save a still image out of real time images. A still image can be saved as a format of Wavelet method file (*.eye) or bitmap (*.bmp) file. Wavelet compression image file can be decompressed and reproduced on Internet browsers such as Netscape or Explorer.

Image Info, ▶
Quality Box ▶
Focus Sensitivity ▶
Image Quality ▶
Save As File

(2) Real-time monitoring

User monitors real-time images clicking video control menu at the bottom of homepage after setting channel, resolution, expansion, and frame rate.



Transmission Control

- **Gray Mode**: If you choose this mode and click the start button, the images are displayed in black and white. So, you can view the images faster.
- **Progressive Mode**: In the case of 'Progressive Mode' on, the images are regenerated from low to high resolution. This function is more useful when you use a low speed network, because it reduces the waiting time.

- **Single Shot Mode** : If you choose the mode and click the start button, only one frame of image is transferred. Therefore, no other images may be viewed. To go back to the real-time images, just click the button again

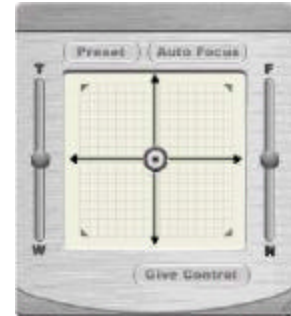
Resolution: User may select a level of resolution among 5 levels (720x486, 720x243, 360x243, 180x121, 90x60). High-resolution image is big, and it is transmitted at slow speed.

Frame Rate: You can choose the transmission speed. If you choose 'Fastest', you can get images at fastest speed. The transmission speed depends much on network line's capacity and user PC's performance.

(3) Pan/Tilt/Preset Control

Pan/Tilt: Locate your mouse cursor on the control panel and keep pressing the left button of mouse, then you can move the direction of WebEye to where you want to see. The nearer location from the center of the panel you click, the less WebEye SPD moves. While the further location you click on the panel, the more WebEye moves. You just release your finger from the mouse to stop moving.

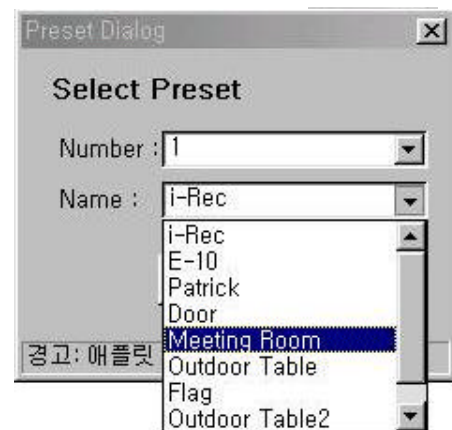
Zoom: You can zoom in/out the image with dragging the ball on the vertical bar 'T', 'W' of control panel.



Auto-Focus: Basically, WebEye SPD has auto-focus function. However, you can control and optimize the focus of image manually.

Preset : WebEye SPD has 64point preset function. If you preset a point, the cam The preset Dialog Box will be activated. Then your selection to a certain point on the list will make the cam move to the reserved point.

Take/Give Control: By clicking this button, user get operation right of pan/tilt/zoom/preset function(Take Control) or hands it over to another person(Give Control). In the case that one user takes the control right, new user may have to wait until the first user finish the PTZ operation.



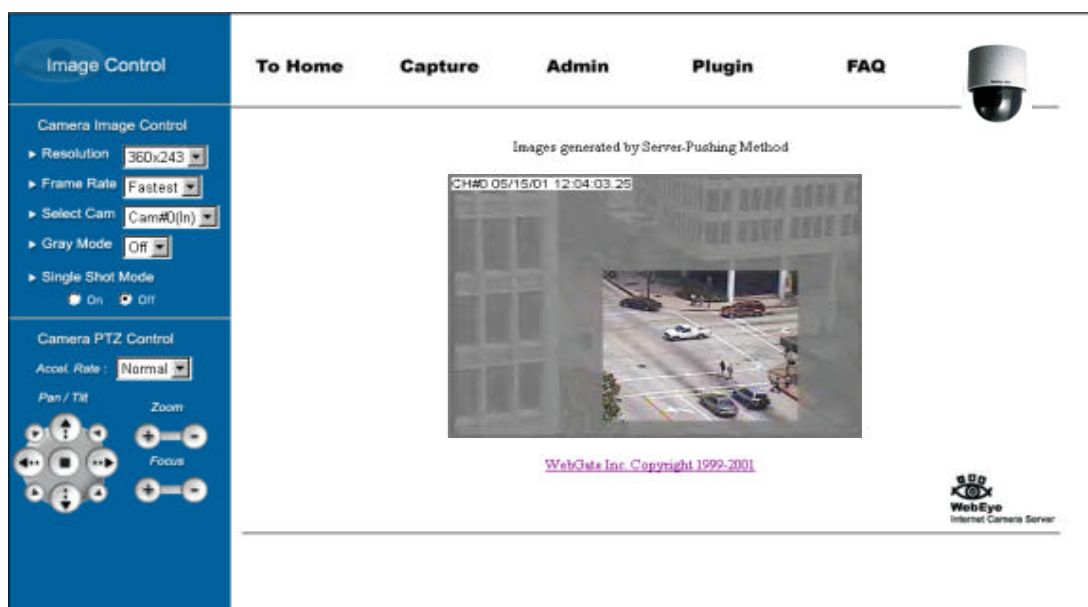
- Theses functions will be explained in detail at chapter VI

2) 720x486 Viewer

By selecting this viewer, a user monitor images of 720 by 486 resolutions. This viewer has the identically same functions of default viewer but the image panel is bigger by 4 times than that of default viewer.

3) Server Push Viewer

If WebEye SPD is installed on a network where firewall is, you may access SPD through server-push viewer to monitor real-time images. If you have information on the network such as which port is block with firewall, you may access with default viewer by changing Web TCP port or video TCP port. For changing TCP port, please refer to Chapter VI 'Configuring Administrator's Configuration at Homepage'.



On server-push viewer, some functions such as 'Progressive Mode' image transmission, 'Image Quality' control, and 'Quality Box' creation menus out of image control and 'Preset', and 'Focus Sensitivity' control out of PTZ control are not supported. Other functions are same as that of default viewer.

(1) Image Control

'Progressive Mode' image transmission menu is not supported.

Resolution

You may select a resolution level among five. (90x60, 180x121, 360x243, 720x243, 720x486)

Frame Rate

You may choose image transmission speed (1fps, 3fps, 5fps, 10fps, fastest)

Gray Mode

If you choose this mode, the images are displayed in black and white. And, you can view the images transmitted faster than in color image. By click again the button, the function is released.

Single Shot Mode

When this button is clicked, one frame of image is reproduced. Therefore, it is stopped transmitting

further image. To resume transmitting real-time images, click the button again.

(2) PTZ mechanism control

'Preset' is not supported.

Pan and Tilt

If you click the buttons, you can move the direction of WebEye to where you want to see.

Zoom

You may zoom in and zoom out.

Focus

You may control manually to optimize the image's focus.

Acceleration Rate

You may choose moving speed of Pan/Tilt/Zoom mechanism among three steps of fast, normal and slow.

(3) Pop-up Menu

'Image Quality' control, 'Quality Box' creation, and 'Focus Sensitivity' control are not supported.

Image Info

You may decide the color (black or white) of the information that is shown on the left top of the image. And you may leave out the information.

Save File As

It is to save a frame of still image as an electric file. A still image can be saved as bitmap (*.bmp) file or Wavelet format file (*.eye). Wavelet formatted image file is to be reproduced on Internet browsers such as Netscape Navigator or Internet Explorer as long as the PC is installed Active-X or Plug-in program. The very image that is shown at the moment when you click the menu is saved.

(4) To Home

This is to go to main viewer. The main viewer is set in administrator's page.

(5) Capture

This is to capture image and save as a file. This menu is the same function as 'Save File As' menu.

(6) Admin

Clicking 'Admin' menu, you go to a login page of administration page. However only the user who has authority as an administrator can access the page with administrator's ID and password.

(7) Plug-in

As WebEye compresses image with Wavelet algorithm, user needs to install Plug-in program to see transmitted image through Netscape Navigator on one's PC. Clicking 'Netscape Plugin' menu, a user accesses a page where to download Plug-in program.

(8) FAQ

User may look up information on trouble shooting clicking 'FAQ' regarding to installation or running WebEye.

VI. Configuring Administrator's Condition at Homepage

This page is for WebEye Administrator. Administrator can login and control operating status remotely. User can access this page by keying in IP address as well as clicking 'Start Configuration' button at Setup program.

1. Administrator Login

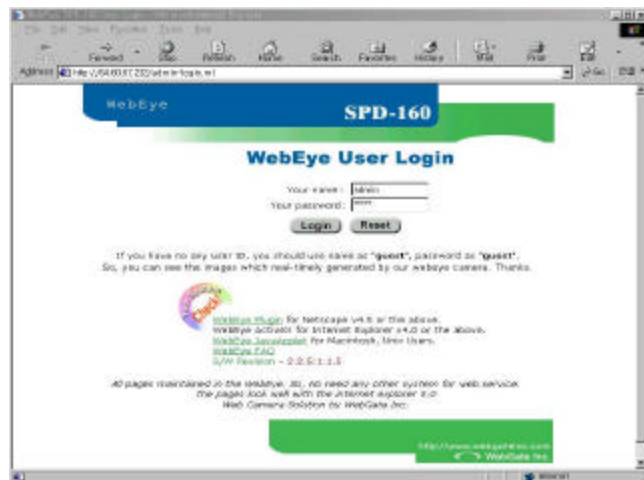
1) Accessing through Setup Program

First you click on MAC address of WebEye to select a certain one. Then you key in its administrator's password and click 'Start Configuration' button in turns. When you click 'Start Configuration' button, the setup program automatically connects you to Admin page of WebEye Homepage. (For more detailed information, refer to Chapter IV 'Assigning IP address and Configuring Administrator's Condition')

2) Accessing through Web Browser

On Web browser, administrator key in IP address of WebEye SPD that one is going to configure. Then administrator accesses WebEye SPD login page. At the login page, administrator should key in administrator's ID and password to access Admin page.

Administrator may also access WebEye SPD real-time image viewer, then access to Admin page clicking 'Goto Admin Page' button. The two login pages look a bit different, but administrator can access Admin page though both login pages.



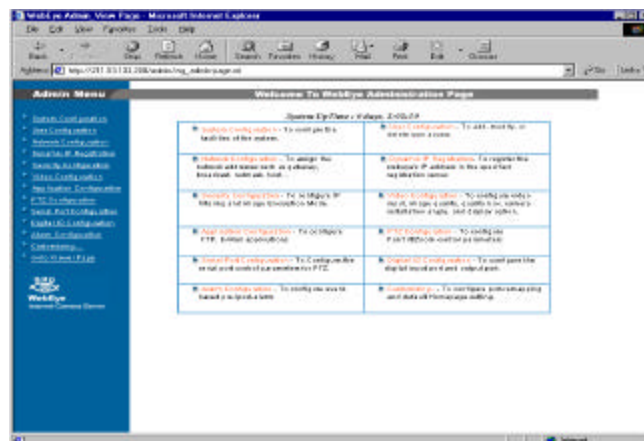
Both default administrator's ID and password are set as 'admin', and administrator may change them at Admin page. But, each ID and password must be composed within 9 bytes. (e.g. 9 English letters)

2. Configuring Administrator's Condition at Homepage

1) System Management

Set date & time, name, location, and description on your WebEye. Model and serial number appear automatically. The 'Name' is to register at a certain server with your WebEye that uses dynamic IP address. (For detailed information, refer to 'Dynamic IP Registration Service for ISDN, xDSL User')

Date & Time: There are three date & time menus. In 'WebEye Current Date & Time' panel, the date and time, which is set in WebEye, appears. In 'System(PC) Current



Date & Time' panel, the same date and time as is set in administrator's PC appears. And user may set one's system(PC)'s date and time into WebEye by clicking 'Time Synchronization' button. In 'Manual Date & Time' panel, administrator may set date and time. And administrator can synchronize manually set date and time with 'WebEye Current Date & Time' by clicking 'Time Synchronization' button.

Administrator's E-mail Address:

In this panel, administrator records one's e-mail address. If administrator put a contact menu of e-mail communication on WebEye homepage, the linked e-mail address to the contact menu is synchronized with it. So administrator can keep up e-mail address easily.

Initialize Flash Infomation: Administrator initializes almost all the information saved on flash memory, through 'Factory Setting'. However 'Date & Time', 'Model', and 'Serial Number' in 'System' menu, 'IP configuration' in 'Network' menu, and all items in 'Video' menu are not initialized. Exactly, Preset Position, which is configured in Factory Setting, is not initialized.

Rebooting: If WebEye has any problem, administrator can reboot it without adjusting power supply. This button works as on/off switch.

Rebooting

2) User Account Management

Configure IDs and passwords of an administrator and 5 users. If you want to open your WebEye to everyone, you may not change IDs and passwords of users. However you should change administrator's ID and password with unique ones of yours.

It is very important to compose any ID or password within 9 bytes' limit. 9 English characters are equal to 9 bytes.

It is possible to give and forfeit authorities for users to control pan/tilt/zoom and to control video with such conditions as quality options, QBOX settings, etc. Administrator has full authorities to give a certain user a right to control or not.

3) Network Configuration

This page is to define network type and set network addresses of WebEye.

DHCP Client Protocol: If administrator activates 'DHCP Client Protocol' menu, all the addresses are going to set automatically by WebEye detecting them from DHCP server of your ISP. The detected addresses are not seen on the screen. And administrator needs not to configure all the address manually.

System Configuration	
Parameter Name	Parameter Value
WebEye Name	00-10000
Model	SPD160 (Detailed HW Information)
Serial Number	S10100000000
SW Version	1.2.0
Installation Location	00-10000
Additional Description	00-10000
WebEye Current Date&Time	2001-07-03 12:56:49 (yyyy-mm-dd hh:mm:ss)
System/PC Current Date&Time	2001-07-03 13:03:46 <input type="button" value="Time Synchronization"/>
Manual Date&Time Setting	2001-07-03 12:56:25 <input type="button" value="Time Synchronization"/>
Administrator's Email Address	yours@your.org domain
Initializing Flash Information	<input type="button" value="Factory Setting"/>
Rebooting Formely	<input type="button" value="Rebooting"/>
<input type="button" value="Apply"/> <input type="button" value="Cancel"/> <input type="button" value="Help"/>	

User Configuration				
User ID	User Account	Password	Re-Typed Password	Access Rights
Administrator	admin	password	password	All
User 1	guest	password	password	All
User 2	guest	password	password	None
User 3	guest	password	password	None
User 4	guest	password	password	None
User 5	guest	password	password	None
<input type="button" value="Apply"/> <input type="button" value="Cancel"/> <input type="button" value="Help"/>				

Select Network Interface: If WebEye is connected on xDSL line that needs PPPoE process, administrator should select 'xDSL (PPPoE)'. However the xDSL line doesn't need PPPoE process, administrator should select 'Ethernet' though WebEye is connected on xDSL line.

Ethernet Interface: Administrator may configure IP address, subnet mask, broadcast address, gateway address, and DNS addresses of WebEye. For broadcast address, administrator may set it automatically by clicking 'Get From Netmask' button after assigning IP address and subnet mask. And depending on network type, administrator may set data packet size with 'Select MTU Size' to utilize the network at most effectively.

When the addresses are not assigned properly, any user cannot access WebEye from local or remote network. Even on the local network, a user is not able to access if administrator does not assign a proper IP address to WebEye.

xDSL Interface: If WebEye is connected on xDSL line and needs PPPoE process, administrator should select 'xDSL (PPPoE)' and configure ID and password for PPPoE. ID and password may be acquired from the ISP that installed the line. And WebEye may get IP address when it is connected on xDSL line.

Network Configuration	
Parameter Name	Parameter Value
DHCP Client Protocol	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Select Network Interface	<input checked="" type="radio"/> Ethernet <input type="radio"/> xDSL(PPPoE)

Ethernet Interface	
Parameter Name	Parameter Value
IP Address	211.53.133.249
Netmask	255.255.255.0
Broadcast Address	211.53.133.255 <input type="button" value="Get From Netmask"/>
Gateway IP Address	211.53.133.1
Select MTU Size	1500 Bytes
Ethernet(MAC) Address	00:30:A1:00:00:00
DNS1 Server IP Address	0.0.0.0
DNS2 Server IP Address	0.0.0.0
DNS3 Server IP Address	0.0.0.0

XDSL Interface	
Parameter Name	Parameter Value
User ID	
Password	
Assigned IP Address	Unassigned

4) Dynamic IP Registration

This page is to register WebEye on dynamic IP registration server.

If WebEye is installed on a network of dynamic IP address (floating IP address), administrator should register the WebEye to 'dynamic IP registration server' to give simple connectivity to common users. If not, no one can access the WebEye through Web browser. It is because that no one knows with which IP address one can access the WebEye.

Dynamic IP Registration	
Parameter Name	Parameter Value
Auto IP Registration Function	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Add Public List	<input checked="" type="radio"/> No <input type="radio"/> Yes
Registration Server Address	webeye.to
Registration Interval	3600 secs
Access Token	
Current Registration Status	Not Registered

To solve the problem WebGate run a server making a list of WebEyes that have dynamic IP addresses. In this list, WebEye registers its information such as name, location, and description, so that common users may detect a certain WebEye. Name, location and description are assigned at 'System Management' page. If administrator does not change them, the WebEye will register default information on the list, and it will be very difficult to point out and access a certain WebEye. The list is on an Internet homepage of WebEye, '<http://www.webeye.to>'.

Auto IP Registration Function: Administrator may register one's WebEye by enabling 'Auto IP Registration Function'. Registration process is that WebEye detects IP addresses from DHCP server and informs the detected IP addresses to dynamic IP registration server. And the server updates already registered information with new one. Please keep in mind that user have to enable 'DHCP Client Protocol' at 'Network Configuration' page to have WebEye get dynamic IP addresses automatically, when WebEye is installed on a network of dynamic IP address. With 'Auto IP Registration Function' menu, a WebEye of fixed IP address can also be registered on the list. Common users may access a certain WebEye by clicking on the name. By clicking on 'Preview', users may see real-time view from WebEye without logging in WebEye.

Registration Interval: Dynamic IP address is commonly used on xDSL, ISDN or Cable Modem lines. To maintain continuous connectivity, user should reset the 'Registration Interval' shorter than the default value. Because an IP is to be changed from time to time, some user may not access by clicking on a WebEye if actual information on WebEye is changed from the registered IP information on the dynamic IP registration server.

WebEye - Dynamic IP Registration Service							
Expired WebEye entries will be automatically deleted from this table (New = 172800 secs) New limit is for the entries created or updated within 28800 seconds.							
144 WebEye(s) available in public from total 144 WebEye(s)							
100 WebEye(s) listed out of 144 WebEye(s)							
Name <input type="text"/> Search <input type="button" value="Search"/>							
No	Name	Mode	Location	Hot Link	Description	Serial Number	Last Update
1	WebEye	E104	Seoul, Korea	Preview	Welcome to WebEye World!	W20080506121	2001-03-20 17:10:33
2	Hackett's	E10	Seoul, Korea	Preview	Visit HackettSecurity.com for more information.	W20080506125	2001-03-20 17:10:38
3	WebEye	E104	Seoul, Korea	Preview	Welcome to WebEye World!	W20080506127	2001-03-20 17:10:35
4	WebEye	E10	Seoul, Korea	Preview	Welcome to WebEye World!	W20080506126	2001-03-20 17:10:47
5	WebEye	E104	Seoul, Korea	Preview	Welcome to WebEye World!	W20080506129	2001-03-20 17:10:10
6	Seoul PC Room	E10	Seoul, Korea	Preview	Welcome Korea PC Room	W20080506128	2001-03-20 17:10:35
7	WebEye	E10	Tokyo, Japan	Preview	Welcome to WebEye World!	W20080506126	2001-03-20 17:09:24
8	WebEye	E104	Seoul, Korea	Preview	Welcome to WebEye World!	W20080506123	2001-03-20 17:02:11

A server to be used for Dynamic IP registration should be installed with proper S/W, developed by WebGate Inc. If you do not run a server for IP registration, keep the server's name as default figure (webeye.to).

Access Token If administrator sets a password here, people should key in the password to access WebEye that is on dynamic IP registration service list. Administrator may prevent one's WebEye from being accessed by unknown users unnecessarily. However you should be cautious that if you set it as 0, you can't register at 'User's WebEye'.

5) Security Configuration

This page is to control accessibility to one's WebEye with IP addresses.

If 'IP/Subnet Filtering Mode' is on, only the users whose PCs' IP addresses are registered to WebEye can access the WebEye. Administrator may temporarily disallow a registered user to access to WebEye with a menu on the right side of each IP address. Any IP addresses are to be listed. If administrator inactivates 'IP/Subnet Filtering Mode', anyone can access one's WebEye through a Web browser with any PC.

Administrator may restrict people to receive images from one's WebEye, even though people accessed it. If 'Image Encryption Mode' is enabled and a pin number is assigned, people have to key in the assigned pin number to see image after accessing WebEye image viewers.

Security Configuration	
Parameter Name	Parameter Value
	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
IP/Subnet Filtering Mode	IP/Subnet Client Address 0 : 0.0.0.0 <input type="button" value="Allow"/>
	IP/Subnet Client Address 1 : 0.0.0.0 <input type="button" value="Allow"/>
	IP/Subnet Client Address 2 : 0.0.0.0 <input type="button" value="Allow"/>
	IP/Subnet Client Address 3 : 0.0.0.0 <input type="button" value="Allow"/>
	IP/Subnet Client Address 4 : 0.0.0.0 <input type="button" value="Allow"/>
	IP/Subnet Client Address 5 : 0.0.0.0 <input type="button" value="Allow"/>
	IP/Subnet Client Address 6 : 0.0.0.0 <input type="button" value="Allow"/>
	IP/Subnet Client Address 7 : 0.0.0.0 <input type="button" value="Allow"/>
	IP/Subnet Client Address 8 : 0.0.0.0 <input type="button" value="Allow"/>
	IP/Subnet Client Address 9 : 0.0.0.0 <input type="button" value="Allow"/>
	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Image Encryption Mode	Encryption PIN Number : <input type="text"/>
<input type="button" value="Apply"/> <input type="button" value="Cancel"/> <input type="button" value="Help"/>	

‘Security Configuration’ is a double-checking function to control accessibility, utilizing ‘User Account Configuration’ at the same time.

6) Video Configuration

This page is to configure every channel with various conditions.

(1) Video Channel State Control

Administrator decides whether to utilize video signal from selected channel in WebEye or not.

(2) Camera Color Type

It is to define whether camera type is color or B/W.

(3) Camera Signal Type

It is to define CCD module of WebEye SPD between ‘NTSC’ and ‘PAL’.

(4) Camera Installation Angle

WebEye SPD can always show images in right angle. If SPD is located on the floor upside down, user can adjust image angel by selecting ‘180 deg’.

(5) Advanced Configuration

By Clicking ‘Advanced Configuration’, you may access the sub page where to configure detailed conditions.

Calibration Parameters

Administrator manipulates screen settings by adjusting brightness, contrast, hue, saturation, horizontal line shift, and vertical line shift from the menu. With ‘Video Gain’ menu, you may optimize the image without adjusting each value of other menus.


Caption Display Options

Administrator may configure caption on real time image with display options such as color and contents. Caption is to be made of time information, channel information, and additional explanation (user defined string).

Visual Setting Parameters

Administrator may configure QBOX and image quality level with aid of real time image. By placing the mouse curse on real time image and clicking the left button, you may view pop-up menus.

Video Configuration	
Parameter Name	Parameter Value
Video Channel State Control	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
Camera Color Type	<input checked="" type="radio"/> Color <input type="radio"/> Black/White
Video Signal Type	<input checked="" type="radio"/> NTSC <input type="radio"/> PAL
Camera Installation Angle	Normal
Advanced Configuration	
<input type="button" value="Apply"/> <input type="button" value="Cancel"/> <input type="button" value="Help"/>	

Advanced Video Configuration	
Parameter Name	Parameter Value
Calibration Parameters	Video Gain : <input type="text"/> (-100 .. 100)
	Brightness : <input type="text"/> (-100 .. 100)
	Contrast : <input type="text"/> (-100 .. 100)
	Hue : <input type="text"/> (-100 .. 100)
	Saturation : <input type="text"/> (-100 .. 100)
	Horizontal Line Shift : <input type="text"/> (-20 ... 20)
	Vertical Line Shift : <input type="text"/> (-20 ... 20)
Caption Display Options	<input checked="" type="radio"/> Black <input type="radio"/> White <input checked="" type="checkbox"/> Time Information <input type="checkbox"/> Channel Information <input type="checkbox"/> User Defined String <input type="text"/>
Visual Setting Parameters	<p>Image Viewer for CH# 0 (Reload Page)</p> <p>Click the mouse right-button for pop-up menu.</p>  <p> <input type="button" value="Apply"/> <input type="button" value="Cancel"/> <input type="button" value="Back"/> </p>

- **QBOX Parameters**: Administrator sets QBOX area with a mouse to 'click and drag'. Selected area shows in 'Left Top Placement' and 'Right Bottom Placement' panels in figures. With 'Ambient Level' menu, Administrator may set quality level of unfocused area in the image (out of the focused range). There are 5 levels. Administrator may set level 5(Darker) to make unfocused area dark and get the transmission speed up.
- **Image Quality Level**: Administrator chooses image quality level from 0 to 9. If level 9 is chosen, WebEye sends the finest image. However, transmission speed will be reduced because of larger sized data. The image level inside the 'QBOX' is the same level as is selected in this menu.

7) Application Configuration

This page is to configure e-mail and file sending function.

(1) Recipient E-mail Address

This is to designate a person to receive E-mail.

(2) Sender's E-mail Address

This is to put a person's e-mail address that is considered as the e-mail sender.

The e-mail sender can be a person who should take care of the situation when events occur. Email will be delivered to a person who is defined as a recipient in the blank of 'E-Mail Recipient'. The person who received email can send a message of countermove to a person who is defined as an e-mail sender. Actually, WebEye sends Email, but it is no use sending E-mail back to WebEye. So a person can be designated to receive counter e-mail.

Another important function of this menu is to avoid a problem that the e-mail is blocked from e-mail server. Some e-mail servers don't receive an e-mail that does not have its valid domain name such as abc@abcdefg.com. It is because there are a lot of junk e-mails. So WebEye and other devices that do not have their valid domain names or only have their IP addresses can't send e-mails. To avoid this problem, WebEye has the menu to put sender's e-mail address. The default value is invalid, so administrator should change the address with valid one. Administrator may put one's e-mail address.

(3) Check E-Mail Options

Relay Mail Server: With the same problem of e-mail blocking, WebEye has a function to relay its e-mail through an available e-mail server so that e-mail can have the relay server's domain name. After activating 'User Relay Mail Server' menu, you key in a server's domain name such as '@abcdefg.com'. The e-mail server of default value is invalid, so don't use the default value when

Application Configuration	
Parameter Name	Parameter Value
Recipient Email Address	
Sender Email Address	yours@your.org.domain
Check Email Options	<input type="checkbox"/> Use Relay Mail Server: mailwebgateinc.com Content-Transfer-Type: Base64
Email Event Configuration	<input type="checkbox"/> Motion Detection <input type="checkbox"/> Sensor Input Detection for Input Port 1 <input type="checkbox"/> Sensor Input Detection for Input Port 2 <input type="checkbox"/> Periodic Sending per 60 minutes Naming Method for the attached image file <input checked="" type="radio"/> DATETIME suffix <input type="radio"/> SEQNUM suffix <input type="radio"/> Manually assigned filename Image Filename: IMAGE.EYE Select Image Resolution: 360x243
FTP Server Address	
FTP User Account	
FTP User Password	
FTP Event Configuration	<input type="checkbox"/> Motion Detection <input type="checkbox"/> Sensor Input Detection for Input Port 1 <input type="checkbox"/> Sensor Input Detection for Input Port 2 <input type="checkbox"/> Periodic Sending per 3600 secs Naming Method for the transferred image file <input checked="" type="radio"/> DATETIME suffix <input type="radio"/> SEQNUM suffix <input type="radio"/> Manually assigned filename Image Filename: IMAGE.EYE Select Image Resolution: 360x243
<input type="button" value="Apply"/> <input type="button" value="Cancel"/> <input type="button" value="Help"/>	

you have to use relay mail server function.

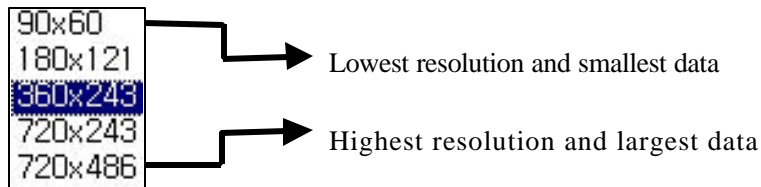
Content-Transfer-Type: It is to define e-mail format. Email servers support 'Base64' format in common, but some servers not. In the case, you may select the format as 'Quoted Printable'.

(4) E-Mail Event Configuration

Event source: Administrator should define with which event E-mail is to be delivered among MD (motion detection), sensor 1, sensor 2. If administrator clicks on sensor1, e-mail is sent when the sensor1 detects events. (To utilize sensor input detection, a sensor should be connected to WebEye.) If administrator clicks on periodic sending, e-mail is sent periodically every preset time. The interval may be modified.

File name: With the images of MD and Sensor event, a file is named combining all options. And with the image of periodic sending event, administrator may decide how to name image files among three methods. Administrator names a file with data & time (DATETIME; E.g. IMG-CH00-2001030-223031.eye) or serial number (SEQNUM; E.g. IMG-CH00-SN1.eye). Also administrator names the file with a fixed one (Manually assigned filename). The image file has its extension of 'eye' so that the file is to be reproduced on Internet browser. With DATETIME or SEQNUM format, WebEye automatically put its extension as eye. When a file name is set manually, make sure to put its extension with 'eye' (e.g. manual.eye). If not, the file cannot be reproduced on Internet browser or other program.

Image quality: Administrator may set image's resolution that is delivered by e-mail. Resolution is to be set among 90x60, 180x121, 360x243, 720x243, and 720x486. An image of 90 by 60 is of the lowest resolution and the smallest size.



(5) FTP directory configuration

Administrator assigns FTP server address, FTP user account, FTP user password, and FTP user path to receive files when events occur.

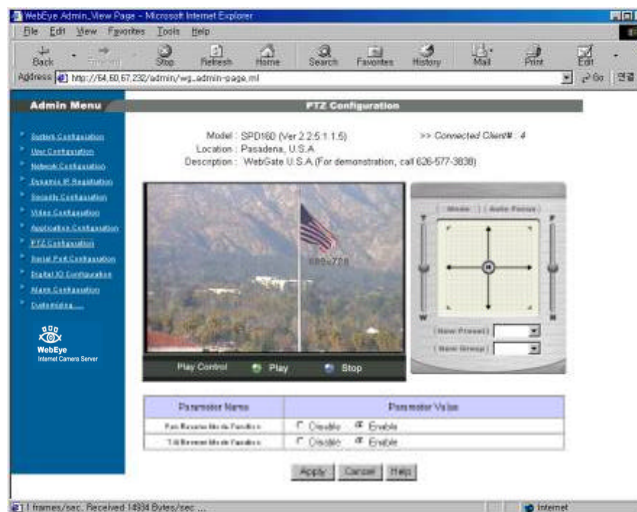
(6) FTP event configuration

Administrator may set sending conditions, image resolution, and filename. Image resolution, filename, and sending conditions setting methods for FTP are same as that of e-mail.

8) Pan/Tilt/Zoom Configuration

WebEye SPD has various special functions such as 64 point Preset, patrol between two different monitoring areas, or group mode swing between more than two different areas. Using these functions, users can obtain an effect of multi-monitoring system with only 1 WebEye SPD through the Internet. To use WebEye SPD efficiently, users should have a good command of these functions.

Pan/Tilt/Zoom control menu is mainly composed of “New Preset”, “New Group” and “Mode”. The former two are for reserving monitoring points and the latter one is for utilizing the reserved Preset or Group. And you should remember that Preset Position is not initialized through “New Preset”



However, you should not enter special characters at ‘User Defined String’ in ‘Advanced Configuration’ of ‘Video Configuration’ page.(For more information, please refer to ‘Video Configuration’) If so, you can’t monitor images at ‘Pan/Tilt/Zoom Configuration’ page. Use only alphabets and numbers. And if you have PC of low level, transmission rate of images may be slow. Because Java Applet support may be different as user’s PC.

Pan/Tilt Reverse Mode Function

This is to set command reverse direction against to up and down direction control arrows. This function is useful when SPD is installed downside up.

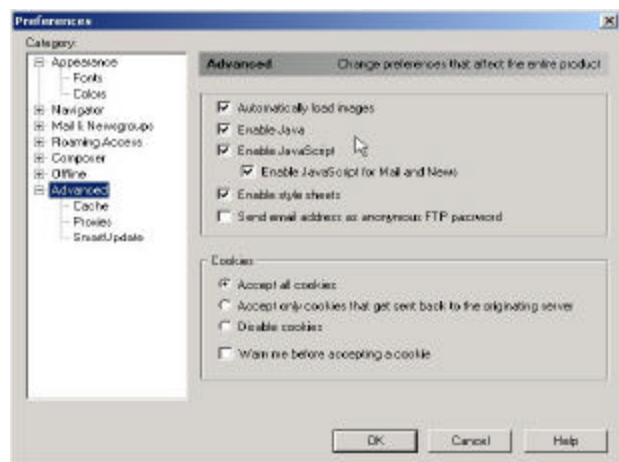
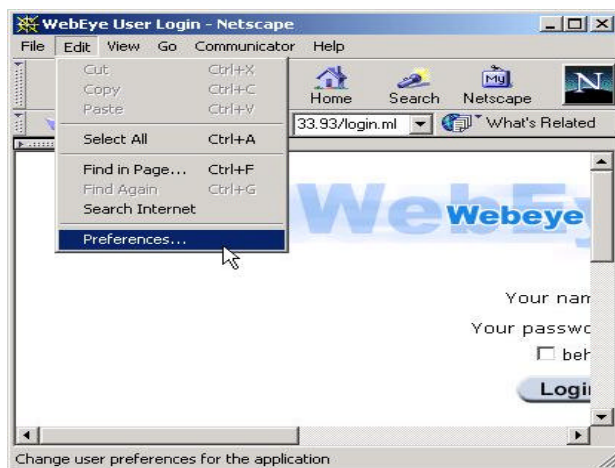
Parameter Name	Parameter Value
Pan Reverse Mode Function	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
Tilt Reverse Mode Function	<input type="radio"/> Disable <input checked="" type="radio"/> Enable

NOTE!! : Java Applet viewer at PTZ Configuration may be so slow in NS 4.7 or others.

- **Netscape Browser**

If you install Netscape Browser, you may use Java applet. Unless you can view applet, you should other method.

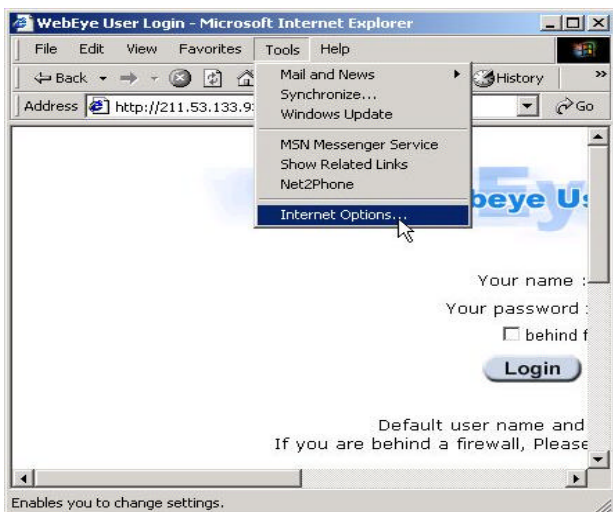
- (1) Select preference menu in Netscape main-menu.
- (2) Select Advanced tab at List control of Preferences dialog, and you can see the information of related java.
- (3) Select Enable Java, and click 'OK' button.
- (4) Close NS and restart to see the applet.



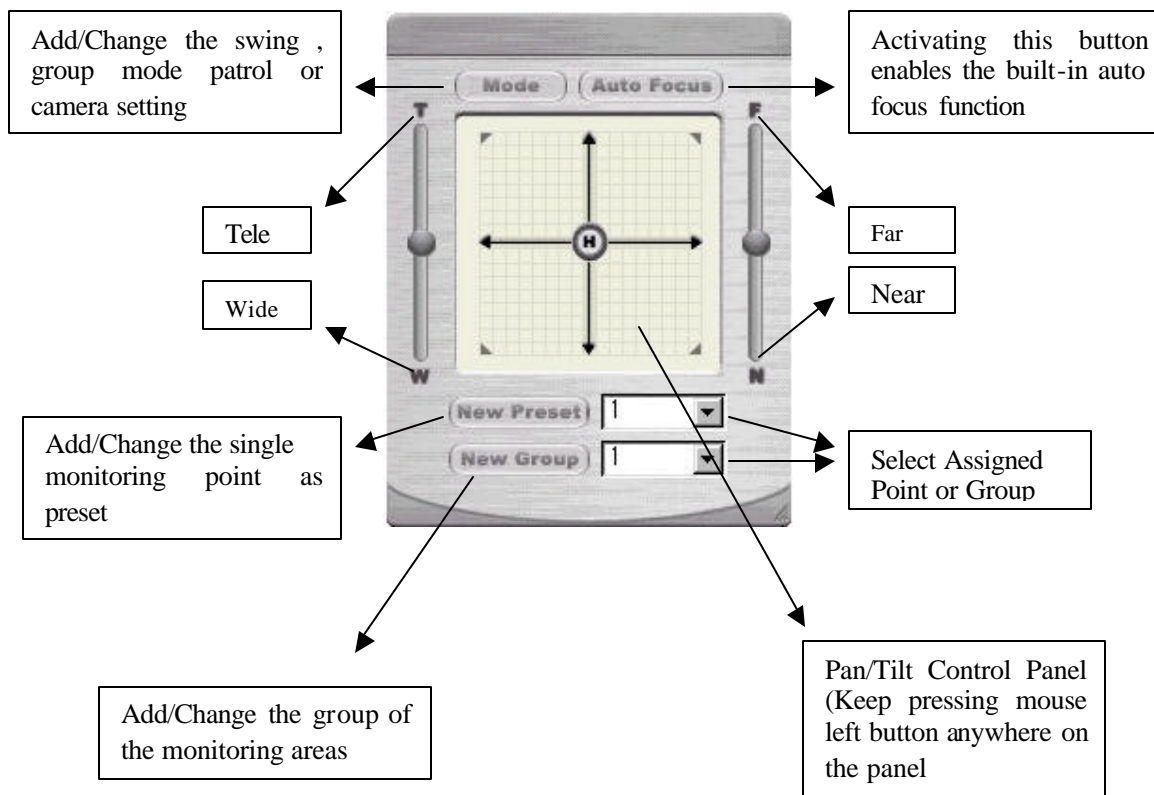
- **Internet Explorer**

If you install Internet Explorer, you may use Java applet. If you can't view applet or loading rate is so slow, you should do like that. You should set 'JIT compiler' of Microsoft VM (Java virtual machine) enable in internet option. If so, loading rate of applet will be fast.

- (1) Select Internet options at Tools in main-menu of IE.
- (2) Select Advanced tab in Internet Options Dialog.
- (3) Select "JIT compiler for virtual machine enabled" in Microsoft VM
- (4) Restart IE.



Pan/Tilt/Zoom Control Panel

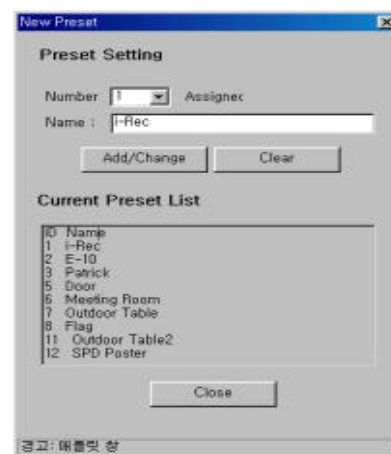


New Preset : Users can reserve up to 64 monitoring points where the cam goes by one click.



Firstly, move the camera where users want to preset. Then click “New Preset” button and preset configuration pop-up window like the right figure will be activated.

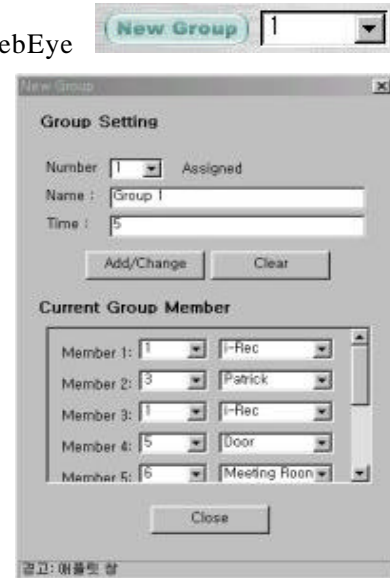
On this window, select the number where users want to reserve new position or change the existing preset, and type the nickname you like for this point. Lastly click the “Add/Change” button and close this window by “Close” button at the bottom of the window.



New Group: This function is designed for sequential group monitoring of several designated preset points WebEye SPD will automatically patrol the preset points with in a group.

Users can easily make a monitoring group by gathering the above preset points. Firstly click the “New Group” button and the New Group configuration pop-up window will be activated like right figure.

On this window, select the number where users want to make a new group or change the existing group. Type the nickname for the group into “Name” item. The third item “Time” is how long the camera will stay at each preset point with in a group. The unit is second. And select each preset as a monitoring group member up to 9. Lastly, click the “Add/Change” button and close the window by “Close” button.



The 'New Group' window has a title bar 'New Group'. Below it is a 'Group Setting' section with a 'Number' dropdown (set to 1), an 'Assigned' checkbox, a 'Name' text field (containing 'Group 1'), and a 'Time' text field (containing '5'). There are 'Add/Change' and 'Clear' buttons. Below this is a 'Current Group Member' section with a list of members: Member 1 (1, i-Rec), Member 2 (3, Patrick), Member 3 (1, i-Rec), Member 4 (5, Door), and Member 5 (6, Meeting Room). Each member has a dropdown for the number and a dropdown for the preset name. There is a 'Close' button at the bottom.

Mode : Main purpose of this menu is to utilize the above preset and grouping function. When you click the “Mode” button, “Mode Setting Dialog” will be activated.

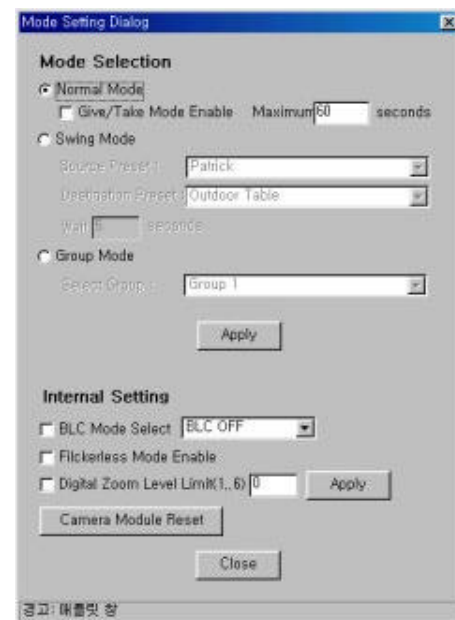


- **Mode selection**

- **Normal Mode :** When a user is making PTZ control, next applicant should wait indefinitely until the former user stop controlling. To prevent this, administrator can select the “Give/Take Mode Enable” and set the time limit for controlling by checking the left checkbox.

- **Swing Mode :** This mode is for automatic patrolling between two preset points which are reserved at the “New Preset” menu. WebEye SPD will move back and forth between the two selected points staying designated seconds at each monitoring point.

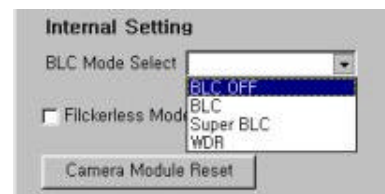
- **Group Mode :** Using reserved group at the “New Group” menu, users can select a group they like to have WebEye SPD to patrol automatically. And there is no staying time setting on the group mode because the reserved group already has the setting through the “New Group” registration.



The 'Mode Setting Dialog' window has a title bar 'Mode Setting Dialog'. It contains three sections: 'Mode Selection' with radio buttons for 'Normal Mode' (selected), 'Swing Mode', and 'Group Mode'. 'Normal Mode' has a 'Give/Take Mode Enable' checkbox and a 'Maximum' text field (set to 60 seconds). 'Swing Mode' has 'Source Preset' (Patrick) and 'Destination Preset' (Outdoor Table) dropdowns, and a 'Wait' text field (set to 5 seconds). 'Group Mode' has a 'Select Group' dropdown (set to Group 1). There is an 'Apply' button. Below is an 'Internal Setting' section with 'BLC Mode Select' (BLC OFF), 'Flickerless Mode Enable' checkbox, and 'Digital Zoom Level Limit(1..6)' (set to 0). There are 'Apply', 'Camera Module Reset', and 'Close' buttons.

- **Internal Setting**

This is the usual CCD camera configuration. Users can utilize the camera option according to the install environment such as BLC(Back Light Compensation), Flickerless(Fixing electronic shutter speed) and Digital Zoom level. “Camera Module Reset” button is also prepared for unexpected hardware failure.



The 'Internal Setting' window has a title bar 'Internal Setting'. It contains 'BLC Mode Select' dropdown (BLC OFF), 'Flickerless Mod' checkbox, and 'Digital Zoom Level Limit(1..6)' text field (set to 0). There are 'Apply', 'Camera Module Reset', and 'Close' buttons. A dropdown menu is open showing options: BLC OFF, BLC, Super BLC, and WDR.

9) Serial Port Configuration

WebEye SPD has an RS232C interface ports for Audio device.

WebEye SPD also support the specialized Audio Device for WebEye series called “Voice Messenger”. This is connected to Audio Device port physically and enabled at this menu.

Serial Port Configuration	
Parameter Name	Parameter Value
Port Device Name	1.RS232
Select Attached Device	None
<div>Apply Cancel Help</div>	

To configure this Voice Messenger, select the “Audio Device” at “Select Attached Device”

- **AGC Control Enable** : When this function is enabled, WebEye SPD will automatically control the input audio volume up and down considering the given noise condition.

Parameter Name	Parameter Value
Port Device Name	1.RS232
Select Attached Device	Audio Device
AGC Control Enable	<input type="radio"/> Off <input checked="" type="radio"/> On
Microphone Volume Level	Level 8
<div>Apply Cancel Help</div>	

- **Microphone Volume Level**: 10 level control for microphone volume is available.

10) Digital I/O Configuration

User configures digital input states and control script. WebEye SPD sends e-mails or/and files when connected external sensors detect events.

Active State for Input Port 1 and Port 2

Administrator defines active state of 2 digital devices connected to two input ports such as infrared sensors. Active states of digital devices may differ depending on items or models (select between ‘NO’ or ‘NC’).

Digital IO Configuration	
Parameter Name	Parameter Value
Device Type for Input Port 1	<input type="radio"/> NO(Normal Open) <input checked="" type="radio"/> NC(Normal Close)
Current Status for Input Port 1	Active State
Device Type for Input Port 2	<input checked="" type="radio"/> NO(Normal Open) <input type="radio"/> NC(Normal Close)
Current Status for Input Port 2	De-Active State
<div>Apply Cancel Help</div>	

Current State for Input Port 1 and Port 2: WebEye SPD shows current states of the two digital devices connected to two input ports. In the status panel, active state or de-active state message shows. ‘De-Active State’ means that connected sensor didn’t detect any event when ‘Apply button’ is clicked. Though this message is not updated until you click ‘Apply’ button again, WebEye SPD receives signal from sensor.

11) Alarm Configuration

Motion Detection Threshold:

User set threshold for motion detection function. Threshold '0' is the most sensitive state and '900' is the duller state.

Alarm Parameters for Email / FTP Application:

User defines image-recording conditions to WebEye, if WebEye detect events through motion detection function (MD Event) or external sensors (SID1 & SID2 Event). WebEye can record 2 frames for 2 seconds before the event and also for 2 seconds after the event.

Alarm Configuration			
Parameter Name	Parameter Value		
Motion Detection Threshold	300 (0 .. 900)		
Alarm Parameters for Email/FTP Application	MD Event	before	Saving [0] Image(s) during [1] sec(s)
		after	Saving [0] Image(s) during [1] sec(s)
	SID1 Event	before	Saving [0] Image(s) during [1] sec(s)
		after	Saving [0] Image(s) during [1] sec(s)
	SID2 Event	before	Saving [0] Image(s) during [1] sec(s)
		after	Saving [0] Image(s) during [1] sec(s)
Alarm Preset	SID1 Event	<input checked="" type="radio"/> Disable <input type="radio"/> Enable Preset Number [06:45-10]	
	SID2 Event	<input checked="" type="radio"/> Disable <input type="radio"/> Enable Preset Number [07:CHL]	
<div>Apply Cancel Help</div>			

Its maximum recording rate is 1 frame per second. WebEye records the images to send them through E-mail or FTP. If event lasts long, WebEye sends images not duplicating regardless overlapped time setting.

Alarm Preset

When there is an event signal from digital device such as infrared sensor, WebEye SPD automatically moves to reserved monitoring point. Event monitoring point reservation is based on preset point configuration at the PTZ menu.

Alarm Preset	SID1 Event	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
		Preset Number [00:WebEye 1]
	SID2 Event	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
		Preset Number [03:Z.O.T.]
<div>Apply Cancel Help</div>		

12) User Custom Configuration

Web Server TCP Port:

TCP port of WebEye SPD is assignable by users. Through the port people can access WebEye SPD and it sends data. Normally, 80 port is assigned as a Web Server TCP port like other ordinary Web Servers.

Video Server TCP Port:

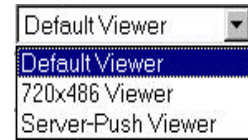
User assigns a port through which WebEye transmits images. Normally, 8080 port is assigned as a video server TCP port.

* Both port for TCP and Video should be open. When network firewall is installed, the ports are sometimes closed. In this case, users should find opened ports by asking local network administrator or port scanning.

Customizing ...	
Parameter Name	Parameter Value
Web Server TCP Port	80
Video Server TCP Port	8080
Select Main Page	Default Viewer
Main Title	Web Camera Solution by WebGe
LOGO Image Source URL	/images/logo.gif
LOGO Image Link URL	http://www.webgateinc.com
Background Color	#FFFFFF
Foreground Color	#000000
<div>Apply Cancel Help</div>	

Select Main Page:

Administrator assigns a viewer as a main page that appears first when users access Webeye SPD. Administrator can select a viewer among 3 different ones such as “Default Viewer”, “720x486 Viewer”, and “Server-Push Viewer”. 720x486 Viewer is to show the biggest image page to which users can not access with “Default Viewer”

**Viewer Editing:**

Viewer Page of WebEye SPD is designed for users to edit easily. Editable parts are as bellows.

- **Main Title** : It is to change the main title that is written on the bottom of the default viewer.
- **Logo Image Source URL**: Administrator may assign a URL of a certain web site from which default viewer gets a logo. The space to put a log locates on the left top of the viewer.
- **Logo Image Link URL**: Administrator may link the logo with a certain web page. User can link the logo with a company homepage or a personal one.
- **Background Color and Foreground Color**: Ground color of default viewer can be changed. Administrator may set the color with RGB value.

13) Goto Viewer Page

Users can go to “Default Viewer Page” by One Click



*** To save the changes, you have to click ‘Apply’ button at every page.**

Detailed Specifications of WebEye SPD-160

1. General

CPU	32bit RISC Embedded processor
Flash memory	8Mbyte
RAM	16Mbyte
OS	Embedded Linux
Video Channel	NTSC or PAL video format are supported 1Ch. External Video Output
Image Resolution Control	720X486, 720X243, 360X243, 180X121, 90X60
Image Compression	Wavelet
Compression Rate	10:1 ~200:1
Transfer Rate	Max up to 30fps (With 10KB image)
Decoding Rate	2 ~ 30fps
Local Compression rate	Max 30fps
Security	Password (Based User Authentication) IP-filtering (Secure Mode) Image Encryption
Alarms and I/O	Motion detection Sending e-mail automatically Sending the images files through FTP automatically Software-controlled 2 alarms input
MISC. function	High quality image area setting Image quality Control (10 Levels) Periodical sending the images through E-Mail, FTP Gray/Progressive/Single-Shot Mode User customized home page publishing supported by FTP
Power Supply	DC 12V, 1.5A via external power supply

2. CCD Camera

Image Sensor	1/4-inch color interline-transfer CCD
Total Pixels	410,000 pixels NTSC-811(H) x 508(V) , PAL-795H) x 596(V)
Active Pixels	380,000 pixels 768(H) x 494(V) , PAL-752H) x 582(V)
Scanning Frequency	15.734kHz (H) 59.94Hz(V)
Synchronization	Internal/External(AC Line Lock)
Video Output	1.0 Vp-p/75 ohm
Interface	RS485, BNC (Video)
Resolution	480/440 TV Lines(Slow Shutter Mode)
S/N Ratio	More than 50dB
White Balance	Automatic Tracing White Balance (ATW)/AWC
Back Light Compensation	Super BLC/BLC/ Wide Dynamic Range/Off
Focus	Auto/Manual
Electronic Shutter	Auto/Manual (1/60 to 1/10,000 12 steps)
Slow Shutter	Auto (1/30 to 1/2)/OFF
Flicker Less	Auto/Manual (Fixed 1/100)
Mechanical Iris	Auto/Manual (Iris Fix Mode)
Preset	64 positions
Gain Control	Auto/Manual
Motion Detection	On/Off
OSD Display	On/Off

3. Lens Specification

Focal Length	F3.9mm to 62.4mm 16x Optical Lens
8x Digital Zoom (Total 128x Zoom)	
Max. Relative Aperture	Wide 1:1.4, Tele 1:2.7
Min. Focus Distance	1,000mm (Tele End)
Min. Illumination	3.0 Lux/0.5 Lux. (Slow Shutter Mode)

4. Pan/Tilt Specification

Pan Rotation	360 continuous
Pan Speed Manual	0.8 to 120 /sec. (64 steps -speed)
Preset	0.8 to 240 /sec. (64 steps -speed)
Tilt Rotation	0 to 90
Tilt Speed Manual	0.8 to 120 /sec. (64 steps -speed)
Preset	0.8 to 180 /sec. (64 steps -speed)

5. Network

Browser	MS Internet Explorer Ver 4.0 or later Netscape Ver 4.5 or later JAVA Applet for non PC User (MAC or Unix)
Connector	10 Based-T Ethernet (RJ-45)
Installation	Assign IP address using setup program or ARP, RARP protocol
Protocols supported	TCP/IP, HTTP, ARP, RARP, ICMP, DHCP, FTP and SMTP
S/W Update	Flash memory allows central remote software updates over the network using FTP or private 'ezLoader'
Management	Configuration is achieved by private setup program And Web server built in Admin. Page

6. Mechanical

Dimension	H x W x L = 45mm x 92mm x 146mm
Weight	187g, without Power supply

7. Environmental

(*) This data is a target specification.

Operating Temperature	0 to 40 C(32 to 104 F)
Storage Temperature	-20 to 60 C(-4 to 104 F)
Relative Humidity	10 to 75%(There should be no condensation)
Storage Humidity	10 to 95%(There should be no condensation)
Power Source	D C 1 2 V \pm 10% (External)
Typical	1.5A, Peak 3A
Power consumption	6 to 12 VA
Dimension	Ø160 x 201 mm (Dome Ø132 mm) Ø6.30 x 7.91 inch (Dome Ø5.20 inch)
Mass	approx. 2.1kg (4.6lb)
Environment	Indoor
Always use the designated Dome in case of outdoor.	
Sensor input	2 auxiliary inputs are supported

Frequently Asked Question

1. About WebEye's Feature

1) What is WebEye?

WebEye is a Web camera server. WebEye is consisted of 3 components as CCD module, Web server, and networking device. WebEye captures, processes, and transmits digital images through network. As WebEye itself operates as a Web server, it does not require other dedicated server connection as PC does. By installing WebEye itself at the desired site, you may monitor views from remote site.

2) What preparations are needed to install?

It needs no other equipment except power and network cable.

3) Which algorithm is used to compress digital images?

WebEye uses Wavelet algorithm to compress digital images. Wavelet is still-image based compression algorithm. Still-image based refers to that WebEye does not capture motion pictures originally, but rather captures still pictures. JPEG, the standard algorithm in image compression, is also based on still-image. WebEye compresses and transmits very fast to present the still images as motion pictures. Process of still image compressing and transmission requires high technology. MPEG is another standard in image compression, but it is based on motion pictures originally.

4) What is the difference between Wavelet algorithm and JPEG in compressing digital images?

Wavelet is more efficient than JPEG by 30-300%. Higher efficiency of Wavelet comes from its encoding method. Wavelet algorithm uses DWT(Discrete Wavelet Transform) while JPEG uses DCT(Discrete Cosine Transform). Due to its efficiency, Wavelet is going to be adopted as standard in digital image compressing by JPEG2000.

Since Wavelet is not yet standardized, it requires to install Plug-in or Active-X control to see images through standard Web browsers as Netscape and Internet Explorer. The size of Plug-in or Active-X control is as big as 3 MB. And the size of 3MB needs quite a long time to download. Therefore, Wavelet is not used commonly. However, WebGate Inc. has developed Plug-in or Active-X control of 300KB to prevent inconvenient time consumption from waiting.

5) Can WebEye support multi users with different resolutions at the same time?

WebEye can support more than 100 users with different resolutions at the same time. Moreover, WebEye has progressive mode and gray mode to support low speed network line users. A user can monitor full resolution (360 X 243) color images while other user sees half resolution (180 X 121) B/W images. And the third user can see the images reproduced in progress mode at the same time.

6) What is maximum transmission speed?

WebEye compresses and transmits 30 frames per second on 10 base-T Network. However this speed is not equal to every user. Because transmission is depends on performance of user's PC and network bandwidth. And there are two viewpoints to calculate transmission speed.

The maximum transmission speed is 30 frames per second from user's viewpoint. However, it does not mean that everyone can receive 30 frames per second. Because, transmission speed also depends on

user PC's performance and network line capacity. WebEye can transmit to up to 100 users simultaneously. If 5 users are receiving 10 frames per second, the total frames that WebEye to transmit are 50 frames per second. In this case, WebEye transmits 50 per second from its viewpoint. And the total size of 50 frames' images is under the network bandwidth. When WebEye is on 10 base-T network, the line can transmit 123 frames of 3KB-images per second

7) What is maximum number of users to access WebEye at the same time?

Very unique compared to other products, WebEye supports up to 100 persons at the same time. Originally WebEye supports more than 100 persons; however, its capacity is fixed to 100 persons to supports already accessed users at rapid transmission speed. When 100 persons access WebEye, they can receive 1 frame per about 10 seconds.

8) Is there any limitation on making ID or password?

Yes, there is a limitation and it is very important. You have to compose any ID or password within 9 bytes both for user and administrator account. 9 English characters are equal to 9 bytes.

2. About WebEye Installing.

1) What network line is to be used?

All network lines can be used except a telephone line. In case you do use network lines of xDSL, cable modem, and ISDN that have dynamic IP addresses, the process of installing and accessing to WebEye is a bit different to dedicated line that has fixed IP address. However, user's PC can utilize telephone line without a doubt.

2) What is maximum extension range of network lines?

UTP cable that is used for LAN can be extended up to 100 meters without bridging. However existing UTP cable can be extended up to 240 meters without bridging.

3) Is a special rack or housing needed when WebEye SPD is installed outdoors?

WebEye itself is not weatherproof. Therefore, it is necessary to equip WebEye with weatherproof housing if WebEye is installed outdoor, like existing Dome camera.

4).When the network is consisted with one permanent IP address and several private IP addresses, can WebEye be connected at the network with a private IP address?

WebEye is a Web server. WebEye can be assigned to with a private IP address. However WebEye should be designated as a local server.

A network that has a fixed IP address is normally equipped with a router and consists local network with various private IP addresses. In this case, all the devices connected on the local network are assigned with private IP addresses. However, all the devices communicate with remote devices using a fixed IP address. Router does convert private IP address into fixed IP address, and have local devices access to remote devices. This function is called as NAT(Network Address Translation).

When you configure a router, you can designate a local device as a local server among all the devices. And you have to key in WebEye's IP address in the blank for the local server address. Otherwise, you cannot access WebEye from remote network. This case happens often when you install WebEye on a local network where a PC is already designated as proxy server.

5) When the network is consisted with only private IP addresses, can WebEye be connected at the network?

WebEye can be connected to LAN having only private IP addresses as long as local users access WebEye. However the whole network can be down, if the network's equipment such as a hub is not acceptable to support all the devices appropriate. Especially, this situation occurs if a lot of WebEyes are connected on a network of narrow bandwidth.

6) If a firewall is on the network, can WebEye be installed and work?

If there is a firewall on the network, 80th port is open for ordinary data communication. However, since WebEye transmits image data, 8839th port is required. Therefore it is necessary to open 8839th port of the network for remote users to access WebEye.

However, it is usual to open only 80th port on the network with firewall because of network security. In this case, remote users can access WebEye with 'Server Push Viewer' that can be found at 'Image Viewers' – 'Other' menu in the 'Default Viewer'. Server Push Viewer enables WebEye to communicate through 80th port. In this case a user can receive images resolutions that are a bit unclear than the original.

Another method is that user change a image transmission port from 8839th port to 8080th port. User may configure the setting at 'User Custom Configuration' page in WebEye Admin page.

7) How can a user see the image sent from WebEye when he uses Netscape?

If a user wants to see the real-time images of WebEye using Netscape browser, one has to install WebEye Plug-in program. The procedure of the Plug-in setup is as below.

Access WebEye using assigned IP address on the Netscape like <http://203.243.232.170/>

Setup the WebEye Plug-in using the Netscape Smart Update

WebEye Plug-in for Netscape is saved on WebEye itself. Accessing the WebEye, Netscape is to install WebEye Plug-in fast. When a user connects WebEye for the first time or has a Plug-in of old version, he has to download it clicking "Download WebEye Plug In Now!" Then click "Grant" and "Install" buttons in sequence.

8) How can a user see the image sent from WebEye when he uses IE-Explorer?

If a user wants to see the realtime images of WebEye using IE-Explorer browser, one has to install WebEye Plug-in and Active-X control for IE-Explorer Browser. Plug-in is used in the server-push, and Active-X control is for live image viewer.

If the Active-X control is not installed in your system or old version, the installation of Active-X control automatically will be taken. All you have to do is just click "Yes" to the question whether your PC install it. And we recommend user should use IE-Explorer browser 4.0/5.0 or above.

When you access WebEye for the first time or you access another WebEye that is of upper version than existing one, your PC asks if you are going to install Active-X control or not. If your PC does not show a question message, you should check if Active-X Control is installed or not. If Active-X Control (WebEye Control) is already installed, you may remove it and re-install. To remove, please refer article 10.

9) How can it solved when Active-X Control is not installed?

Occasionally, WebEye control program (Active-X Control) is installed improperly according to types of computers. In this case, user may not see video on the screen or see a message of 'No Video Input'.

To solve this problem, user should remove and try to re-install WebEye control program as follows. Remove WebEye control program by clicking the right button and selecting 'Remove' menu. At a PC that uses Windows98 OS, the program is installed in the directory of C:\windows\Downloaded Program Files. And at a PC of Windows NT or 2000, it is in the directory of C:\winnt\Downloaded Program Files. Then, access again to WebEye and install Active-X Control program. If you may not see video properly even though you do the above-mentioned process, contact WebGate for more information.

10) How can it be solved when the runtime errors of the Plug-in/Active-X control occur?

10.1) If you see the message box like as "WebEye client initializing is failed", do as follows.

This is because user's PC does not have Winsock2 library. Winsock2 library for Windows 95/98 can be downloaded from <http://tucows.channeli.net/> or WebEye's homepage. After download Winsock2, install it into system. Then re-run Web browser.

11) It is impossible to assign IP address to WebEye with 'Ping' command. What is the problem?

Ping command is only used on local network. With a PC or a notebook computer, you can assign an IP address to WebEye connected on local network with ping command or setup program. If you cannot assign IP address to WebEye with ping command, you should check under written 2 points.

First, you watch the LED in the rear of WebEye. For accurate judgment, you disconnect and re-supply power to WebEye. WebEye has two LED of yellow and green in the rear. When you supply power to WebEye, green LED is on for two second then it is off. Afterwards it blinks once every two seconds. Yellow LED is on for 5-6 seconds after supplying power then it is got off. Afterwards yellow LED blinks continuously when it sends images. If green LED blinks once every four seconds, there is a problem at networking. Networking problem can be caused by bad network line and very rarely by LAN port of WebEye. In the situation, you check whether your network line works properly or not, and if there is dirt on WebEye's LAN port. If you cannot find any abnormality or malfunction on network line or WebEye's LAN port, ask your distributor for after-sales service.

If the LED blinks normally, you check the IP address of your PC or notebook computer. As explained before, ping command is only for a local network. Connected on a local network means that every device has local IP address. If your PC or notebook has a remote IP address compared to an IP address that you are going to assign to WebEye, you cannot assign an IP address to WebEye with your PC or notebook. Same local IP address of C grade network means that first 3 rooms' numbers are same but the fourth ones are different. For example 203.243.232.111 and 203.243.232.112 are same local network IP addresses, but 203.243.232.111 and 204.243.232.112 are remote network IP addresses to each other. This case can happen even when you connect your PC to WebEye with a crossover cable. Especially when you use a notebook computer, this case often happens. Because a notebook computer is portable, there are great possibilities to change its IP address to connect to various networks.

However there is another possibility. Two IP addresses of the same numbers from the first room to the third room on C grade network line can be remote IP addresses to each other. It is because there is 'Network Mask' on the network.

For example, if a Netmask is set on 203.243.232.192, there are two local networks. One network has IP addresses from 203.243.232.0 to 203.243.232.191. And the other has IP addresses from 203.243.232.193 to 203.243.232.255. So you cannot assign an address of 203.243.232.111 to WebEye with a PC that has an IP address of 203.243.232.193. (For detailed information, please refer to Appendix 5)

12) There is some problem to access WebEye. Sometimes I can access WebEye and sometimes not. How can it be solved?

Mostly this problem occurs on Cable Modem, ISDN, and xDSL lines that use modems or routers. Those lines connect WebEye and ISP through their modems or routers, and the modems or routers are set to disconnect their connection while WebEye does not use lines. It is because ISP sets the condition on the modem or routers to prevent their lines from being loaded a lot. Generally, a modem or a router is set to disconnect network in 3-5 minutes after WebEye stops using lines. In that case, there is no way for users to access WebEye; it is because WebEye does not require a modem or a router to connect a line nor send any image unless a user tries to access it. But users also cannot access WebEye when a modem or a router disconnects the line.

If you have access problems with xDSL, Cable Modem, and ISDN network from time to time, you should set 'Dynamic IP Registration Interval' short like a minute, even though you assigned a fixed IP address to WebEye. With this setting, WebEye sends signal once per minute to register IP address to a dynamic IP registration server. When WebEye sends signal, modem connects line to WebEye. To maintain continuous connection, user should set dynamic IP registration interval shorter than the connection duration of a modem.

Utilizing IP Addresses on Local Network

1. Introduction

Most of our businesses are done via Internet, lately. We play with information by transmitting through e-mails and searching the world of Internet. IP address is what we utilize to access to the Internet.

Currently used IP addresses are limited. And there are 5 classes networks in the world for now, and a network contains lots of IP addresses. A network can hold limited IP addresses. The numbers depend on network class. 5 classes are from A to E, and the most common one is C class network.

2. IP construction and Network class

1) IP construction

xxx	xxx	xxx	xxx	(xxx: 0 – 255)
X1	X2	X3	X4	

2) Network class

A class: A network that contains IP addresses from 0 to 127 at room 'X1'.

Network ID: X1

Host ID: X2, X3, X4

Total number of Aclass networks is 128 in the world.

B class: A network that contains IP addresses from 128 to 191 at room 'X1'.

Network ID: X1, X2

Host ID: X3, X4

Total number of Bclass networks is 65,534 in the world.

C class: A network that contains IP addresses from 192 to 223 at room 'X1'.

Network ID: X1, X2, X3

Host ID: X4

It is the most common network in the world, and the total number of C-class networks is 2,097,152

D class: A network that contains IP addresses from 224 to 239 at room 'X1'. D-class network is for multicasting, and it is not allowed to use for common users.

E class: A network that contains IP addresses from 240 to 255 at room 'X1'. E-class network is reserved.

3. C-class Network

1) Features of Addresses

IP address: Three digits number in room 'X4' are for Host ID, and the numbers are from 0 to 255. Among the numbers, 0 is used for Network ID, 1 is used for Router IP(Gateway address) and 255 is used for Broadcast address. Therefore the numbers from 2 to 244 are IP addresses that can be assigned to WebEye, iRec Cam104, PC etc.

Network ID: It is to identify a network. Generally the first number is assigned as Network ID.

Gateway address: It is an IP address of router that is connecting Internet and local network. Remote users can access local network over Internet through the gateway (router). Generally the second number is assigned as Gateway address.

Broadcast address: It is to broadcast to all devices that are connected on local network. Broadcast address is a destination for broadcasting and it is determined by calculating. All devices connected on local network have a same Broadcast address.

Subnet Mask address: It is to divide a local network into two remote networks. Subnet Mask address roles as a border. The addresses that can be used as Subnet Mask addresses are limited (0, 4, 8, 16, 32, 64, 128)

2) Network configuration

(1) To use as a local network

Network ID: xxx.xxx.xxx.0

Gateway Address: xxx.xxx.xxx.1

Subnet Mask Address: 255.255.255.0

Broadcast Address: xxx.xxx.xxx.255

IP Addresses: xxx.xxx.xxx.2 – xxx.xxx.xxx.254

(2) To use as two remote networks (1/2 + 1/2)

Sub-Network ID: xxx.xxx.xxx.0

Gateway Address: xxx.xxx.xxx.1

Subnet Mask Address: 255.255.255.128

Broadcast Address: xxx.xxx.xxx.127

IP Addresses: xxx.xxx.xxx.2 – xxx.xxx.xxx.126

Sub-Network ID: xxx.xxx.xxx.128

Gateway Address: xxx.xxx.xxx.129

Subnet Mask Address: 255.255.255.128

Broadcast Address: xxx.xxx.xxx.255

IP Addresses: xxx.xxx.xxx.130 – xxx.xxx.xxx.254

(3) To use as three remote networks (1/2 + 1/4 + 1/4)

Sub-Network ID: xxx.xxx.xxx.0

Gateway Address: xxx.xxx.xxx.1

Subnet Mask Address: 255.255.255.128

Broadcast Address: xxx.xxx.xxx.127

IP Addresses: xxxxxx.xxx.2 – xxx.xxx.xxx.126

Sub-Network ID: xxx.xxx.xxx.128

Gateway Address: xxx.xxx.xxx.129

Subnet Mask Address: 255.255.255.192

Broadcast Address: xxx.xxx.xxx.191

IP Addresses: xxx.xxx.xxx.130 – xxx.xxx.xxx.190

Sub-Network ID: xxx.xxx.xxx.192

Gateway Address: xxx.xxx.xxx.193

Subnet Mask Address: 255.255.255.192

Broadcast Address: xxx.xxx.xxx.255

IP Addresses: xxx.xxx.xxx.193 – xxx.xxx.xxx.254

Updating WebEye SPD Firmware

Warning

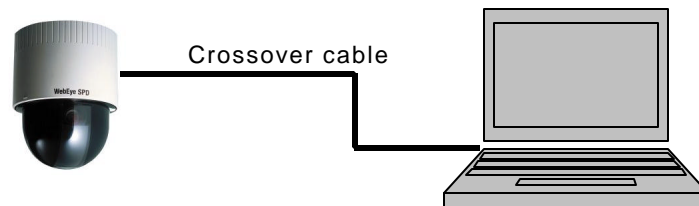
This process is to update the current firmware that is already installed into your WebEye with a new updated firmware.

If you are to begin the process, wait until the 'Loading complete' message appears. And during the process, do not give physical shock nor disconnect network and power. Otherwise, your WebEye can be damaged seriously, which may result inappropriate operation or operation failure.

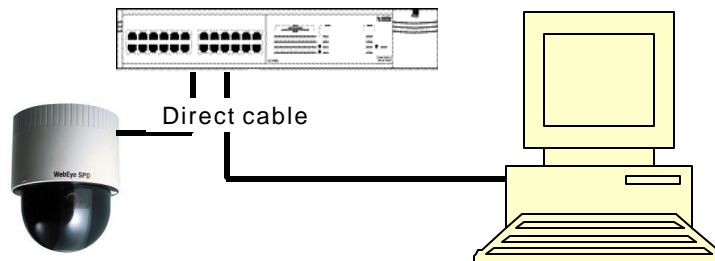
If you failed to update WebEye firmware or WebEye does not operate properly after updating process, contact WGI distributor in your area.

1. Connect WeEye SPD to a PC.

When you do updating, it is strongly recommended to connect WebEye to a PC directly using a crossover cable.



If a crossover cable is not available you may do the process with a direct cable connected a HUB(LAN). When you do updating on LAN, your WebEye and a PC should be connected on local network.



* You may also do the process on remote network.

2. Upgrade firmware with upgrading program

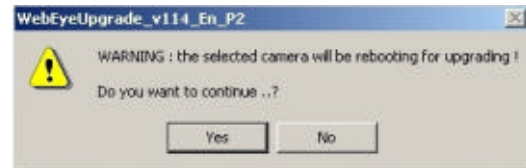
(1) Practice upgrading program and select WebEye that you are going to update by clicking on IP address or MAC address in the list.

When an IP address appears in the blanks of 'Selected IP address', key in the administrator's password in the blank of 'Administrator's password'.

Then click 'Start' button.



(2) Click 'Yes' button to reboot WeyEye.



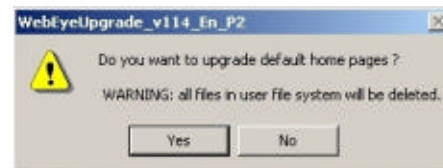
(3) Click 'OK' button to start rebooting process.



(4) If WebEye has a firmware of different version, you are asked whether to replace with new one. Then confirm it by clicking 'Yes'.



(5) It will be asked if you want to format user file system. If you maintain current format of WebEye homepage that you modified, click 'No'. To use default one, click 'Yes'.



(6) When upgrading is completed, reboot WebEye by clicking 'OK' button.



(7) If you have another WebEye to upgrade, follow the same process from (1) to (6). If not, quit the program by clicking 'Exit' button.

WebEye SPD Physical Installation Guide

1. Contents

Item	Q'Y	Remarks
Ceiling Suspension Bracket	1	Connector B' D attached
AC Adapter mounting Plate	1	
AC Adapter fixing screw M3	6	
Camera fixing screw M3	1	
Tapping screw M4	3	
Safety wire	1	
Safety wire fixing bolt & nut	2	
Ceiling screw anchor	3	Use this item when necessary

2. WebEye SPD physical installation procedure .

(1) Before installation, confirm strength of the location where the “Ceiling Suspension Bracket” is installed.

(2) Make a hall of 124mm±1mm for bracket installation

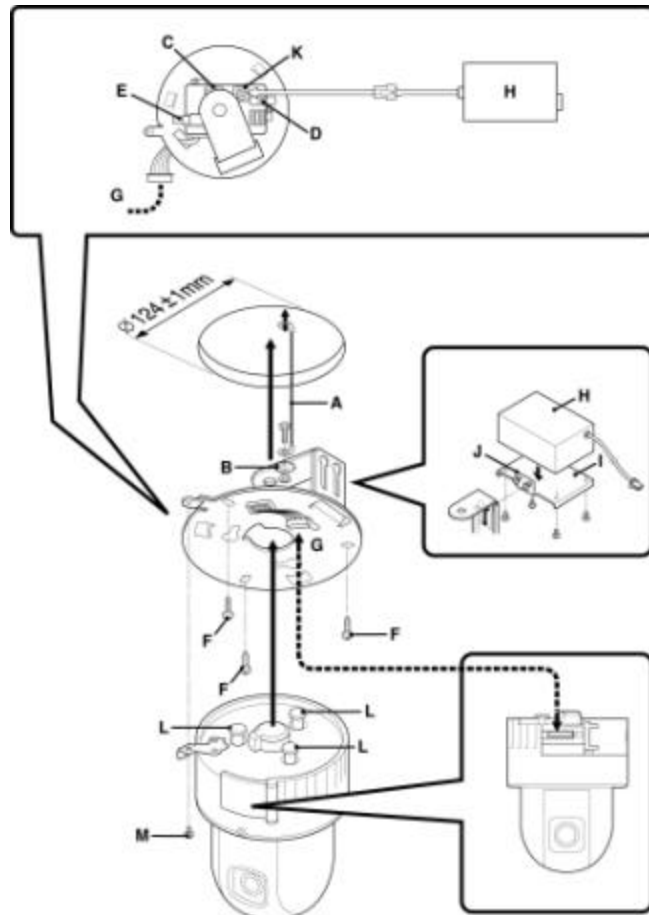
(3) Fix the Bracket to anchor with the included “Safety Wire”(A). If anchor point is located near the camera installation point, you can use it. Connect the safety wire(A) to bracket hall(B) with the included bolt and nut.

*** Caution**

The anchor bolt should be fastened strongly enough to endure no less than 10Kgf.

(4) Connect LAN cable to Ethernet connector (C). When you want to see the video image through the CCTV monitor, connect a coaxial cable to Video Out connector (E)

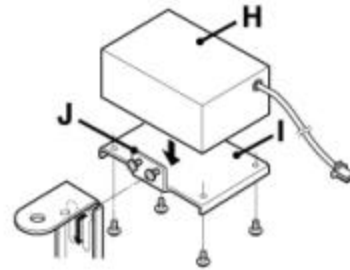
(5) put the bracket in the installation hall and fix it with included M4 tapping screw(F). Before installation of the bracket, camera data cable (G) had to be connected to camera body and pulled toward ceiling.



(6) Adapter installation : Adapter should be attached on the Ceiling Suspension Bracket.

(7)-1 Fix the AC adapter on the included mounting plate (I) with 4 M3 screws

(7)-2 Screw the two included M3 bolts to the side of mounting plate(J) leaving a margin of 1.2~2mm. Insert the assembled mounting plate to the side hall and pull it down. And fasten the two M3 bolts



(8) Connect the camera cable(G) to camera body.

(9) Connect output connector(H) of AC adapter to connector supply connector(K) of camera body

(10) Insert the three camera body holders(L) to the halls of suspension bracket and turn the body clock-wise to fasten. And fix it with the included M3 screw (M).

*** Caution**

Must install WebEye SPD with power disconnected. Otherwise, you may drop the camera because the dome part start turning when the camera data cable is connected.

WebEye SPD Power Adapter Installation Guide

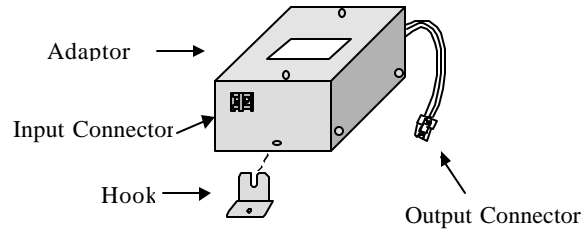
1. 12V Adaptor For WebEye SPD (SAC-24CK)

1) Checking the Package Contents

Check that the following items are included in the package. Adapter (1), Power Cord(1), Hook (2)

2) Installation

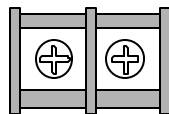
Refer to Ceiling Suspension Bracket Guide (Appendix 5), when this adaptor is linked with Ceiling Suspension Bracket SM1600FP. Attach the Hook included the package to the building superstructure when this adaptor is used alone.



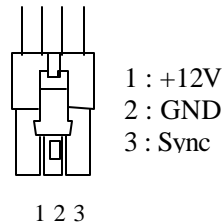
3) Specification

Model	AC24CK
Input Voltage	AC24V \pm 10% 50/60Hz (Supplied by a dedicated power supply)
Power Out	DC 12V \pm 5% 1.5A(2.5A peak)
Power Consumption	36VA max
Operating Environment Temperature	0 C~ 40 C
Dimensions	103(W) x 130(D) x 72(H) mm
Mass	790g

<Input Connector>



<Output Connector>



CAUTION

Turn off the power supply for both the Camera and the adaptor before making any connectors.

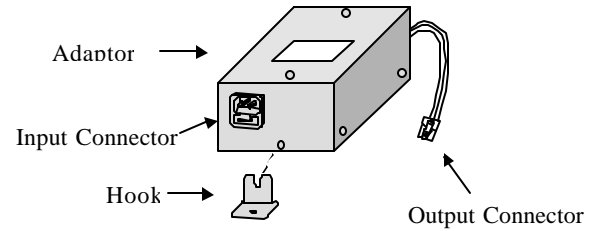
2. 12V Adaptor For WebEye SPD (SAC-1600NK)

1) Checking the Package Contents

Check that the following items are included in the package. Adapter (1), Power Cord(1), Hook (2)

2) Installation

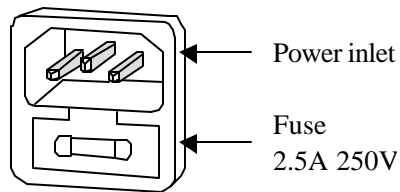
Refer to Ceiling Suspension Bracket Installation Guide (Appendix 5), when this adaptor is linked with Ceiling Suspension Bracket SM1600FP. Attach the Hook included the package to the building superstructure when this adaptor is used alone.



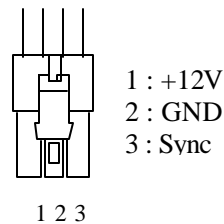
3) Specification

Model	AC24CK
Input Voltage	AC 120V \pm 10% 50/60Hz
Power Out	DC 12V \pm 5% 1.5A(3A peak)
Power Consumption	36VA max
Operating Environment Temperature	0 C ~ 40 C
Dimensions	103(W) x 130(D) x 72(H) mm
Mass	760g

<Input Connector>



<Output Connector>



CAUTION

Turn off the power supply for both the Camera and the adaptor before making any connectors.

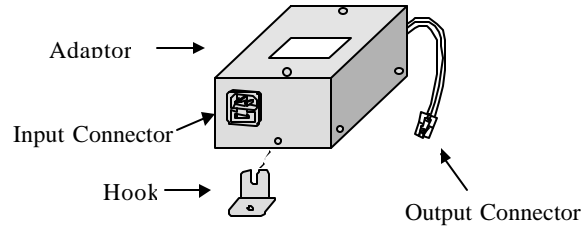
3. 12V Adaptor For WebEye SPD (SAC-1600PK)

1) Checking the Package Contents

Check that the following items are included in the package. Adapter (1), Power Cord(1), Hook (2)

2) Installation

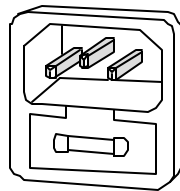
Refer to Ceiling Suspension Bracket Installation Guide (Appendix 5), when this adaptor is linked with Ceiling Suspension Bracket SM1600FP. Attach the Hook included the package to the building superstructure when this adaptor is used alone.



3) Specification

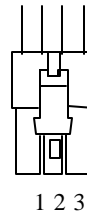
Model	AC24CK
Input Voltage	AC 220V~240V 50/60Hz
Power Out	DC 12V \pm 5% 1.5A(3A peak)
Power Consumption	36VA max
Operating Environment Temperature	0 C ~ 40 C
Dimensions	103(W) x 130(D) x 72(H) mm
Mass	760g

<Input Connector>



Power inlet
Fuse
2.5A 250V

<Output Connector>



1 : +12V
2 : GND
3 : Sync

CAUTION

Turn off the power supply for both the Camera and the adaptor before making any connectors.